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ELITE

ELITE AUDIO/VIDEO COMPONENTS PRODUCT REFERENCE GUIDE

2006/2007

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ELITE

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2006/2007 ELITE AUDIO/VIDEO COMPONENTS PRODUCT REFERENCE GUIDE

True to their name, Pioneer Elite components are designed for a very select group of users — those who settle for nothing less than the best in audio and video. The state-of-the-art performance and specifications of the high-end products are the results of uncompromising standards of engineering and manufacturing, painstaking selection of parts and devices, and careful testing of each and every component. Pioneer Elite is the single brand solution for the discriminating home theater enthusiasts.

This year, Pioneer has introduced a comprehensive range of components for creating a 1080p home theater system — the first time in the world that this has been done under a single brand. The latest lineup of Elite plasma display panels (PDPs) includes the PRO-FHD1, a 50-inch PDP with 1920 x 1080p resolution. The higher resolution and larger number of pixels are due to Pioneer's superior panel driving and display panel technologies. These ensure higher light emission efficiency, higher contrast and brightness, and a wider color space. These technologies are also applied to the other latest PDPs. In addition, Pioneer has introduced its first Blu-ray Disc player, the BDP-HD1. Blu-ray is a next-generation optical disc format expected to replace DVD. Featuring a much larger capacity than DVD, Blu-ray allows far higher picture and sound quality. Enjoy Blu-ray movies displayed on the PRO-FHD1 with 1080p resolution — and all the smooth touch of the original 24fps film. You can combine the PRO-FHD1 and BDP-HD1 via one of the latest Elite A/V receivers. These can receive and send 1080p signals via HDMI terminals, while delivering superb sound.

The new Elite components also feature an even closer link with PCs. The PDPs and the Blu-ray Disc player come with Home Media Gallery, which allows LAN connection with PCs for playing stored video, photo, and music files while sitting in your living room.

In this Product Reference Guide to the Pioneer Elite Series, you'll find details about these and other technologies incorporated in the Elite products. We hope you will find this guide useful.

PUREVISION PLASMA DISPLAY PANELS

Elite Plasma Display Panels: Technological Highlights for 2006/2007

1080p Home Theater From Pioneer
- **1080p Home Theater from Pioneer**

Pioneer Innovations in Panel-Driving Technologies
- **New PureDrive™ II**
- **ACE IV (Advanced Continuous Emission Technology IV)**
- **Intelligent Color Management**
- **Intelligent Active DRE**

Display Panel Technologies
- **Deep Encased Cell Structure With Crystal Emissive Layer and New Materials**
- **First Surface PRO Color Filter — A New Elite-Exclusive Panel Technology**
- **TV Guide On Screen™ System**

Features for Higher-Level Entertainment
- **Home Media Gallery**
- **ISF Certified Calibration Configuration (C^3)**
- ATSC Digital Broadcast Compatibility
- DCR (Digital Cable Ready) Tuner
- HDMI Input
- SR+ Terminal (A/V Receiver Control)

Advanced Technologies for a Wide Array of Benefits
- **Block Noise Reduction**
- "PURE" Mode for AV Selection
- 10-bit 3D Digital Y/C Separation Circuit
- Natural Re-Size
- Digital Chroma Decoder
- Digital Noise Reduction Circuit/MPEG Noise Reduction Circuit
- Dynamic HD Converter
- Natural Enhancer
- Digital CTI
- Color Management
- Selectable Screen Sizes
- Multi-Window Display
- Closed Caption Compatibility
- Surround Modes — SRS, TruBass, and FOCUS
- **Subwoofer Output**
- Speaker Systems

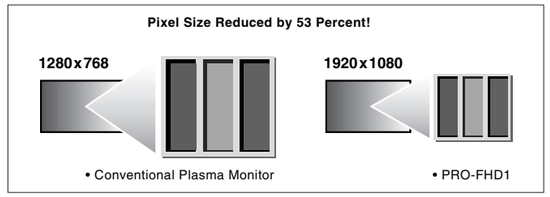
1080p Home Theater from Pioneer

PRO-FHD1 — A 50-Inch 1080p Elite Plasma Display Panel From Pioneer

Pioneer is now offering the PRO-FHD1, the world's first 50-inch Plasma Display Panel (PDP) to deliver up to 1080p resolution with 2 073 600 (1920 x 1080) pixels.

Compared to conventional technologies, this resolution requires a larger number of pixels and half-sized cells. However, simply shrinking the cells creates several problems. Smaller cells lower the light emission efficiency, which makes the overall picture darker. Shrinking also causes gas discharge timing to be delayed, and increases the possibility that individual cells will misfire.

Pioneer's advanced technologies overcome these problems, allowing the PRO-FHD1 to deliver sharp, bright, accurate images at 1080p resolution. Light emission efficiency has been improved by the Deep Encased Structure with the Crystal Emissive Layer, plus new red and blue phosphors. These also improve contrast and brightness while maintaining low energy consumption. In addition, T-shaped electrodes prevent cells from misfiring.



High Resolution With Real-Theater Quality

In addition to 1080p resolution, the Pioneer 1080p home theater delivers movie content with the natural feel of films.

24fps — The Key Figure for Real-Film Quality

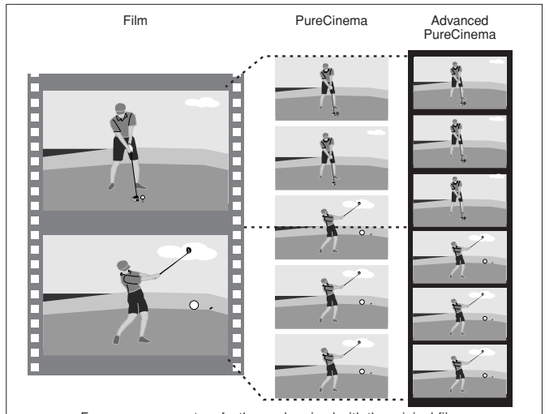
In movie theaters, most films show 24 serial images (frames) per second. This 24fps rate is maintained through the entire movie-making process, from shooting and filming to recording on Blu-ray (or DVD) discs.

Converting 24fps to 60fps

Most players change 24fps movie sources to fit the NTSC standard of 60fps, by alternating between repeating frames twice and three times (2-3 pull down). Because some frames are repeated more than others, movies lose their natural feel. Even when the player uses 24fps signals, the display panel or TV converts them to 60fps.

24fps x 3 = 72fps: Pioneer's Advanced Solution

The PRO-FHD1 does not change 24fps to 60fps, thanks to Pioneer-exclusive Advanced PureCinema with 3-3 Pull Down. This function creates three full copies of each frame, for 72 progressive frames per second. This balance between frames lets you enjoy real-theater quality while sitting in your living room!



Frame arrangement perfectly synchronized with the original film

Create a 1080p Home Theater System with Pioneer Elite Components

For the first time in the world, a comprehensive range of components for creating a 1080p home theater system is now available — thanks to Pioneer.

Use HDMI connection to combine the PRO-FDH1 with the BDP-HD1 Elite Blu-ray Disc Player and Elite A/V receiver. The Pioneer Elite A/V receiver transmits lossless, all-digital audio and video signals from Blu-ray Discs. You get high-quality multi-channel audio, plus enhanced images that feature vivid colors, blacker black, finer details, and superb contrast.

Pioneer Innovations in Panel-Driving Technologies

New PureDrive™ II — Fully-Digitalized Video Signal Processing for Even Higher Picture Quality

With conventional plasma display panels (PDP), input signals are converted back and forth between analog and digital before being sent to the display panels. This tends to cause noise, degrading the quality of displayed pictures. As a leading manufacturer of PDPs, Pioneer developed PureDrive™ technology, featuring all-digital video signal processing. The latest Elite PDPs come with its latest version — New PureDrive™ II.

The New PureDrive™ II features custom chipsets which ensure a wide range of picture-quality benefits, including lower noise, finer gradation, and more natural color reproduction. (See the figure below.)

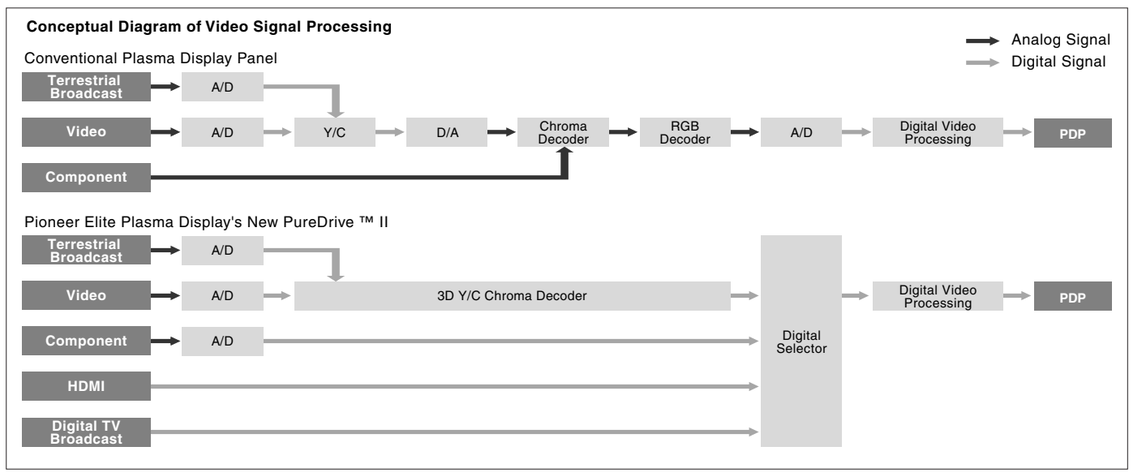
ACE IV

ACE IV (Advanced Continuous Emission Technology IV) — newly built into the latest Elite PDPs — is one of the biggest benefits of The New PureDrive™ II. This technology delivers the following advantages:

1. Smoother Gradation
The new technology allows even smoother gradation — with more steps than the previous version — letting you reproduce even more colors.

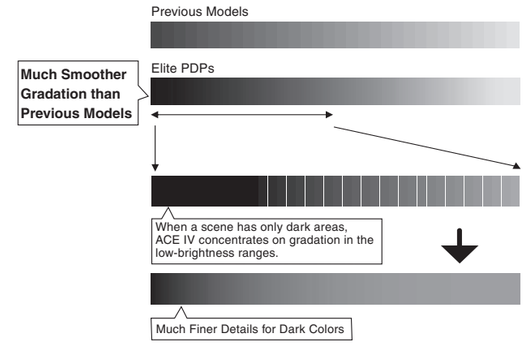
2. Finer Details in Low Brightness Ranges
ACE IV automatically analyzes the overall picture to optimize gradation and brightness levels. When a scene has only dark areas, such as night views and low-lit rooms, ACE IV detects this and concentrates on gradation in the low-brightness ranges, to reproduce details much finer than usual for dark colors.

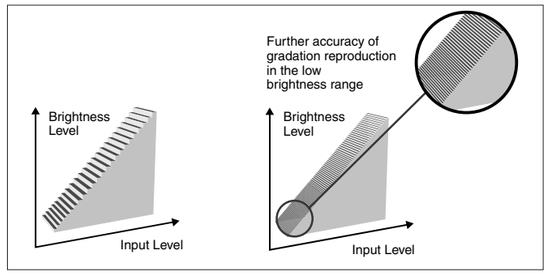
New PureDrive™ II



3. Elimination of False Contours
It is a Pioneer-exclusive benefit that eliminates sharp edges where there should be smooth gradation.

ACE IV


Previous Models
Much Smoother Gradation than Previous Models
Elite PDPs
When a scene has only dark areas, ACE IV concentrates on gradation in the low-brightness ranges.
Much Finer Details for Dark Colors



Noiseless Pictures without False Contours

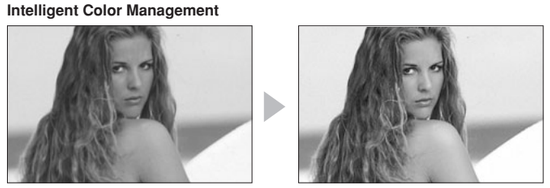
Conventional Plasma Display Panel
False contours lower the picture quality

Pioneer's Elite Plasma Display Panel
Smooth, natural image without false contours

Intelligent Color Management (PRO-1540HD/PRO-1140HD/PRO-940HD)

The new Pioneer Elite PDPs come with Intelligent Color Management. This analyzes the color information of pictures, and automatically optimizes four color elements — red, green, blue, and skin — without losing the natural color balance of the whole picture. Gardens will have more vibrant greens, people will have more natural skin color, and much more.

Intelligent Color Management



OFF

ON
More natural skin color

Intelligent Active DRE (PRO-1540HD/PRO-1140HD/PRO-940HD)

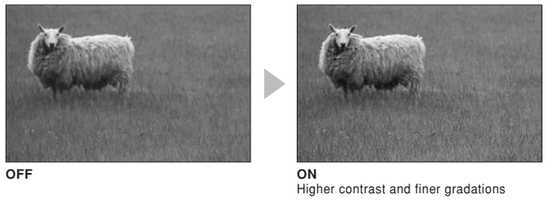
The New PureDrive™ II also provides Active DRE (Dynamic Range Expander). This offers wider picture control options than the previous version (which only offers High, Mid, Low, and Off).

The latest Pioneer Elite PDPs come with an even more advanced version of Active DRE — Intelligent Active DRE. This technology constantly detects variations in picture information, including low-brightness signals, and scattered peak and bottom luminance levels (like a lawn reflecting sunlight). The Intelligent Active DRE automatically optimizes the parameter settings for the displayed picture. For example, when a scene has a large shaded area, the gamma setting is automatically adjusted for finer gradations.

Intelligent Active Dynamic Range Expander

Parameter	Function
Dynamic Contrast	Emphasizes the contrast between dark and bright images, so that (for example) sunlight falling through trees looks brighter and edges of human faces become more distinct.
Black Level	Emphasizes dark areas for greater distinction from bright areas.
Automatic Contrast Limiter	Automatically compensates to create the optimum contrast characteristics.
Gamma Control	Controls gradation characteristics.

Intelligent Active DRE



OFF

ON
Higher contrast and finer gradations

Display Panel Technologies

PDP Technology

The PDP screen is actually two panels of glass with nearly a million pixels sandwiched between them. The pixels consist of tiny cells that hold gas, with electrodes on the top and bottom. Electrical discharges cause the gas to emit ultraviolet light that excites red, green and blue phosphors, which in turn radiate visible light to produce bold, color images.

Black Stripe Coating for Vivid Images

The additional black stripes help reduce the amount of external light reflected off the screen surface, which greatly improves contrast. Viewers can enjoy sharp, vivid pictures, even under bright ambient lighting, with no washed-out colors or poor contrast.

Deep Encased Cell Structure With Crystal Emissive Layer and New Materials

The new Elite Plasma Display Panels have higher brightness and blacker black for increased realism, while also consuming less power.

The Crystal Emissive Layer (part of the Deep Encased Cell Structure) is a layer of crystal with an especially well-aligned structure. It is applied to the surface of the front glass substrate. The following display panel technologies also improve light emission efficiency, in synergy with the video signal processing of New PureDrive II:

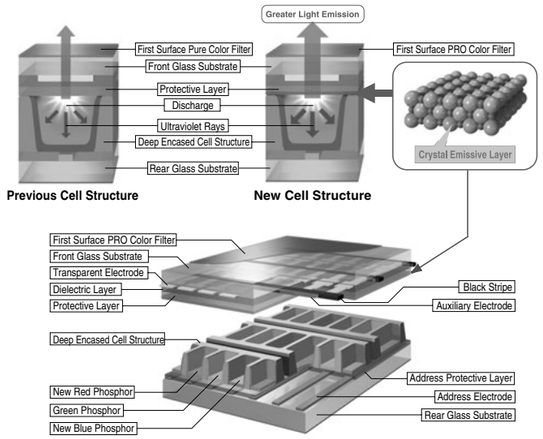
New Dielectric Layer

A new material for the dielectric layer ensures 20% higher light emission efficiency over previous models, for brighter pictures with lower voltage.

New Red and Blue Phosphors

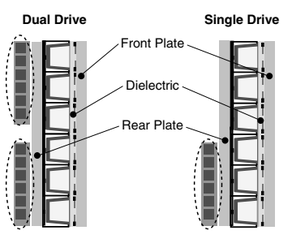
The new Elite PDPs also boast new red and blue phosphors. The new red phosphors allow a variety of red shades to be faithfully reproduced, which is difficult to achieve with conventional PDPs, LCD TVs, etc. The new blue phosphors improve the realism of blue shades, and are more durable than conventional materials.

Deep Encased Structure with Crystal Emissive Layer



Energy-Saving Technologies for the "Single Drive" Display

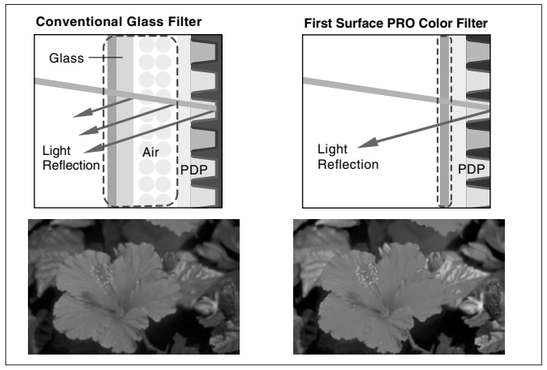
These energy-saving display panel technologies allow the use of a "single panel drive" while conventional panels use "dual drive". In addition to lower power consumption, the new Elite PDPs also conserve material — another environmentally-friendly solution from Pioneer.



First Surface PRO Color Filter — A New Elite-Exclusive Panel Technology

The latest Elite PDPs feature the new First Surface PRO Color filter — an Elite-exclusive feature. This is an upgraded version of the Pioneer-developed First Surface Pure Color Filter. It allows superior contrast to be maintained even in bright environments. This is due to a layer of film affixed to the glass panel covering the plasma cells. Unlike conventional glass filters, this panel technology eliminates the space between the film and the glass. This allows ambient light reflection to be reduced, improving the contrast ratio in bright environments by 20%.

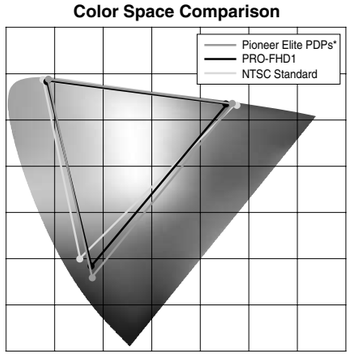
The First Surface PRO Color Filter uses a new special film, which better balances the colors of passing light with 15% lower transmittance compared to the previous filter. This further improves the contrast ratio in bright environments — by 20% compared to the previous filter.



Wider Color Space — Surpassing the NTSC Color Standard

The combination of the above panel technologies allows the new Elite PDPs to faithfully reproduce all red, green, and blue colors over a wider color space, which surpasses the NTSC color standard by 7% with the PRO-FHD1, and by 9% with the PRO-1540HD, PRO-1140HD, and PRO-940HD.

Color Space Comparison



*PRO-1540HD, PRO-1140HD, and PRO-940HD

Features for Higher-Level Entertainment

Home Media Gallery With DLNA Certification and Windows Media Connect Compatibility

Digital devices for home use are increasingly popular, and people are consuming and creating digital content at a much higher rate than ever. Not only has the variety of content increased, but also the variety of audio and video formats. Pioneer's Home Media Gallery function brings all of this into your living room. This Elite-exclusive function lets you play digital videos, digital still photos, and compressed music files stored in your PC — or multiple PCs — even when the PC is located in another room. Connect a new Pioneer Elite PDP to your home network, and the unit automatically seeks out (for example) your WMV or MPEG2 videos, JPEG still photos, and MP3 or WMA music files, and plays them via your audio-visual system. Extremely easy operation is ensured by an intuitive on-screen GUI, easy-to-read displays, and user-friendly remote control. Home Media Gallery even allows playback of content from your PC with up to 1920 x 1080p resolution.

In addition, the Home Media Gallery is designed to DLNA (Digital Living Network Alliance) guidelines. This means the Elite PDPs can play networked music, videos, and photo files from other DLNA 1.0-compliant devices, regardless of the brand.

Microsoft Windows Media Connect is a new technology that lets you deliver music, photos, and video stored on a PC to devices in your living room or other places. Download this freeware and enjoy access to all your PC archives at your fingertips.

The Elite PDPs also allow playback of Microsoft PlaysForSure-protected content from a wide range of popular online movie and music service providers. Just look for the PlaysForSure logo.

*A previously existing or new home network, Microsoft Windows XP, and Microsoft Media Connect Software (free for licensed users of Microsoft Windows operating system through Windows updates) are required for all home network and Home Media Gallery features.
**The PlaysForSure logo, Windows Media, and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
*** DRM (Digital Rights Management)-protected files on the server are not playable on the PDPs and show up in the Home Media Gallery with a lock icon next to them.

TV Guide On Screen™ System

The new Elite PDPs are compatible with the TV Guide On Screen™ — a free, interactive on-screen TV program guide that you can easily browse with the remote control. It shows you a list of programs broadcast now, or in the coming week, by channel or category. The system provides a wide range of convenient features, including:

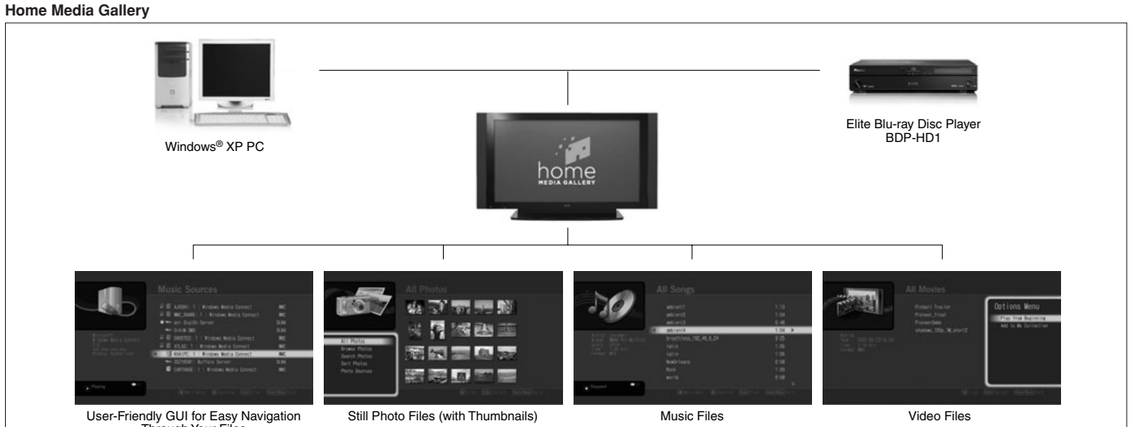
(1) User-Friendly GUI

The system guides you through programs with user-friendly GUI. Easy-to-understand icons and a broad array of displayed information make it simple to use.

Screen Components for TV Guide On Screen™

1. TV GUIDE logo
2. Clock — Shows the current time.
3. Time slot — Time is divided into 30-minute slots and arranged horizontally.
4. Time tub — Indicates the currently selected time slot.
5. Current service label — Indicates the currently selected service.
6. Service bar — Gives access to various services of the program guide.
7. Title — Shows the TV program title.
8. Info bar — Various icons for getting information or the status of an item.
9. Video window — Lets you continue watching the current program while using the program guide.
10. Panel ads and panel menu entry — Space for show/product advertising and the panel menu.
11. Channel logo
12. Info box — Shows brief information about a selected program.

Home Media Gallery



* The GUI screen design is subject to modifications without notice.

(2) Easy Recording Operations

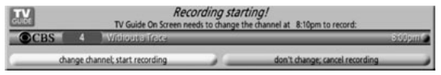
Just choose a program from the list and press the REC button on the remote control — the program will automatically be recorded to a selected recorder. You can set recording frequency to, for example, "Once" or "Weekly" (every week at the same time). You can also set whether to start/end recording on time or up to 120 minutes before/after the scheduled time. TV Guide On Screen™ alerts you when the time for a scheduled recording overlaps with another you set previously. An alert is also displayed when recording is about to start, giving you the option of cancelling the recording, even when the TV Guide On Screen™ system is turned off.

On-Screen Alert (when scheduling overlaps for two programs)

RECORDING CONFLICT!
Recording "Good Morning America" will override the auto-tune reminder for "A Night to Remember".
record anyway
don't record this show

Use the cursor to select "record anyway" or "don't record this show".

On-Screen Alert (when a scheduled recording is about to start)


Recording starting!
TV Guide On Screen needs to change the channel at 8:10pm to record:
CBS 4 Without a Trace 9:00pm
change channel, start recording
don't change; cancel recording

To cancel the recording and stay on the current channel, select "don't change; cancel recording".

(3) Program Reminders

If you set a program reminder, the PDP alerts you when the program is about to be aired on another channel. Reminders can be set for individual episodes or every time a program airs. The "auto tune" function automatically changes the current channel to show you the program. This function also provides an on-screen alert when the chosen program overlaps another that you previously selected for auto tuning or scheduled recording.

Program Reminder Alert

(4) Program Search Functions

Program search is possible by category, such as Movies, Sports, or Children, or by keyword(s). Alphabetical search is also available, showing you all the programs whose titles start with a certain letter. When search results are displayed, scheduling a recording is as easy as pressing the REC button on the remote control. These functions are also available for HDTV programs.

Category Search Screen

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In Canada, TV GUIDE is a registered mark of Transcontinental, Inc. and is used under license by Gemstar-TV Guide International, Inc.
**TV Guide On Screen™ interactive program guide provides listings for cable-ready, cable box, and digital cable services as well as over-the-air broadcast. It does not provide listings for satellite services.

ISF Certified Calibration Configuration (C³) (PRO-1540HD/PRO-1140HD/PRO-940HD)

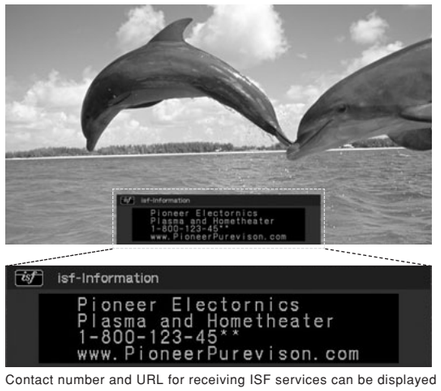
ISF C³ is an Elite-exclusive feature that enables the PDP to be optimized for the specific room where it is placed. As an optional service available through Elite dealers, a specially-trained ISF professional can inspect the conditions of the viewing room and calibrate contrast, tint, sharpness, color levels, and other parameters to best fit the environment. Room layout and size, ambient light (for both day and night viewing), and other conditions that affect picture quality are measured and factored in. The result is unparalleled picture accuracy.

Once the ISF C³ calibrations are made, ISF becomes an additional preset mode for AV Selection, allowing you to revert back to the TV's original settings or make fine tuning adjustments. You can toggle the ISF mode back and forth whenever you want.

The new Elite PDPs come with the latest generation of this technology, which allows detailed Gamma control independently for RGB (red, green, and blue) with nine different options to choose from. The units also permit calibration via RS-232C interface, and make ISF C³ information more legible, with 4-line 24-character display in both capital and small letters.

In addition, contact numbers and other information about dealers can be displayed on the screen as "ISF Information" (see the figure below). This makes it easier for users to request optional paid services.

ISF icons are displayed as preset modes for AV Selection



Contact number and URL for receiving ISF services can be displayed

ATSC Digital Broadcast Compatibility

The new Elite PDPs come with a built-in ATSC (Advanced Television Systems Committee) compatible tuner. In addition to regular TV (NTSC), the units show three types of ATSC digital broadcasts — Standard-Definition, Enhanced-Definition, and High-Definition — with a Pioneer technology that up-converts video signals for the highest-possible picture quality.

Resolution at a Glance

BEST	**HD:** HIGH-DEFINITION	720p (progressive) or 1080i (interlaced) minimum *Digital Transmission*	About 5x better than conventional TV
GOOD	**ED:** Enhanced-Definition TV	480p (progressive) or 480i (interlaced) *Digital Transmission*	About 2x better than conventional TV
O.K.	**SD:** Standard TV Conventional TV	480i (interlaced) *Analog Transmission*	Standard for past 60 years

DCR (Digital Cable Ready) Tuner

The new Elite PDPs feature a built-in unidirectional digital cable tuner, which provides easy "plug and play" of basic cable channels without an external cable box.

*Requires use of a CableCARD™.

HDMI™ Input

HDMI (High Definition Multimedia Interface) is an uncompressed, all-digital interface for both audio and video signals — the first industry-supported interface of its kind. With a single-cable connection, it allows transmission of a huge amount of high-quality data — such as uncompressed HDTV signals — to be input at speeds up to 5GBps. In addition, the latest Elite PDPs are compatible with 10-bit signals, for faithful reproduction of delicate signal details. This lets you combine the PDPs with an DV-79AVi Elite DVD player, for example, to enjoy superb picture quality.

Another benefit of HDMI is its simplicity. It provides a straight digital path from point A to point B without affecting the signal in any way. Additionally, it doesn't perform unnecessary compression and re-compression steps, so the signal remains in a pure, digital state. This lossless process maintains a higher level of image quality than other connection systems.

HDMI provides plug and play capability and accommodates all of the current ATSC digital television formats. It also supports up to eight channels of audio. And despite its huge bandwidth power and ability to accommodate both audio and video, the plug itself is much smaller than a DVI plug.

The latest Elite PDPs come with two HDMI inputs. You can keep the PDP connected with both a Blu-ray Disc player and an STB, for example.

SR+ Terminal for A/V Receiver Control

Connect the Elite PDP to a Pioneer A/V receiver* via SR+ terminal, and the display automatically selects the receiver's signal source. This permits on-screen control of the receiver's sound level, surround mode, and other functions.

*Pioneer A/V receivers with a SR+ terminal only

Advanced Technologies for a Wide Array of Benefits

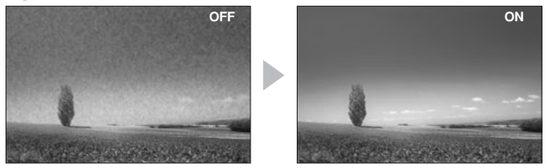
Block Noise Reduction

Block noise is caused by insufficient image compression. Instead of a smooth image, objects appear to be made of squares (blocks) — especially with fast-moving objects like waves. Block Noise Reduction helps minimize this problem.

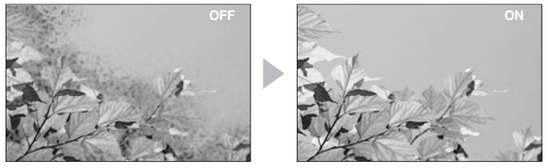
Digital Noise Reduction Circuit and MPEG Noise Reduction Circuit

Special high-luminance cyclic Digital Noise Reduction circuitry reduces random digital noise, including color noise and inconsistency (especially seen in dark image areas) that arise in the signal reproduction process of terrestrial broadcasts, DVDs, and others. The Elite PDPs also come equipped with MPEG Digital Noise Reduction, which cuts "mosquito noise" caused by MPEG video compression used in DVD.

Digital Noise Reduction



MPEG Noise Reduction



"PURE" Mode for AV Selection

The Elite PDPs feature the "PURE" mode for AV Selection. This mode delivers pictures without any enhancement (Gamma, Color, Tint, Sharpness, etc), minimizing the artifacts of extra video processing.

10-bit 3D Digital Y/C Separation Circuit

NTSC (analog) video images consist of two signals, luminance (Y) signals for brightness information and chrominance (C) signals which contain color information. When analog video is played back, the Y and C signals must be kept separate or they will interfere with each other, which results in annoying video noise such as "cross color", or rainbow patterns in picture areas with fine detail, and "dot crawl" — distracting, visible dots moving along the edges of images. To combat these, Pioneer has developed the 10-bit 3D Digital Y/C Separation Circuit exclusively for use in plasma display panels. Powered by New PureDrive II, the circuit effectively keeps Y and C signals separate, reducing the annoying noise and improving the rendering of contoured objects and integrity of images.

Natural Re-Size

Many plasma display panels allow the user to select a screen mode best suited to the material being viewed — for example, when watching a regular 4:3 TV show on a 16:9 widescreen monitor, the image can be stretched to fill the entire screen. But with conventional plasma displays, that stretching process causes problems such as blocky, fuzzy, or over-stretched images. The Pioneer Elite plasma display panels have an exclusive Natural Re-Size function that re-shapes the picture and allows it to maintain a natural appearance without adding the artifacts that deteriorate picture quality.

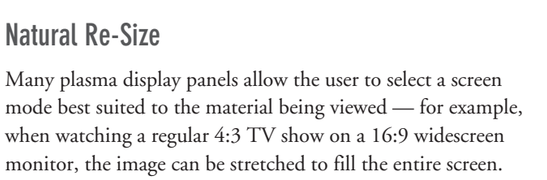
Digital Chroma Decoder

Color noise is another form of analog video interference — noticeable speckled imperfections seen within solid colors on your screen. The new Elite plasma display panels feature a 10-bit Digital Chroma Decoder to reduce noise and provide better frequency response, for pure, clean colors.

Dynamic HD Converter for Sharper Images

Interlaced signals of terrestrial broadcasts and DVD and PC video sources are up-converted into progressive signals for optimal viewing on the PRO-1140HD (1280 x 768-dot high-resolution) and the PRO-940HD (1024 x 768-dot high-resolution). With the number of on-screen detection points significantly increased to 84, HD converter offers sharper, more natural images free of jagged edges and distortion seen on displays with conventional converters.

Dynamic HD Converter

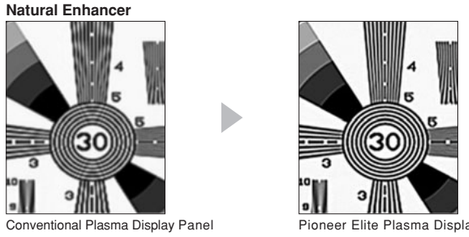


Conventional PDP — Pioneer Elite PDP with Dynamic HD Converter

Natural Enhancer

Conventional contour image correction technologies effectively sharpen contours, but also affect picture qualities, causing annoying noises such as jagged edges. The Natural Enhancer takes contour image correction to the next level. On any source, analog or digital, the Natural Enhancer cleans up the jagged edges and wavy "moiré" patterns, and enhances the contrast at the edges of images to reproduce clean, detailed pictures.

Natural Enhancer



Conventional Plasma Display Panel — Pioneer Elite Plasma Display Panel

Digital CTI

Conventional plasma display panels have difficulty accurately rendering a colored image laid over another — a man in a dark blue jacket standing in front of a red wall, for example. The usual result is a dithered pattern and a muddy combination of colors where the two images intersect. With the Pioneer Elite PDPs, however, Digital Color Transient Improvement (CTI) smooths out edges of colored images so that they are more distinct, offering true color fidelity and color resolution.

Selectable Screen Sizes

Whether you are watching conventional TV broadcast, wide-screen DVDs, or wide-screen movies, the Pioneer Elite PDPs have five (eight for PRO-FHD1) selectable screen modes that can handle any format. You can watch conventional broadcasts in traditional 4:3 mode, or fill in the entire screen with ZOOM or WIDE mode. When viewing DVDs and Digital TV, use the FULL mode to perfectly match these wide screen (16:9) images to your screen. When watching widescreen movies, you can use CINEMA mode.

The PRO-FHD1 additionally features a new "DOT by DOT" mode, which delivers high-resolution pictures with dot-by-dot precision from 1920 x 1080 pixel sources. The unit also comes with variations of CINEMA mode (CINEMA 14:9) and FULL mode (FULL 14:9), respectively.

All the Elite PDPs also come with a PC mode, which provides three selectable screen sizes for non-XGA signals. The PRO-1540HD and PRO-1140HD come with a PC mode for XGA signals, too.

AV Mode

Item	Description
4:3	For 4:3 "standard" pictures. A side mask appears on each side.
FULL 14:9*	For 14:9 squeeze pictures. A thin side mask appears on each side.
CINEMA 14:9*	For 14:9 letterbox pictures. A thin side mask appears on each side, and you may also see bars on the top and bottom with some programs.
WIDE	In this mode the picture is progressively stretched toward each side of the screen.
FULL	For 16:9 squeeze pictures.
ZOOM	For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programs.
CINEMA	For 14:9 letterbox pictures. Bars may appear on the top and bottom on some programs.
Dot by Dot*	Matches input signal with same number of screen pixels. Enabled only when input source comes with 1920 x 1080 pixels.

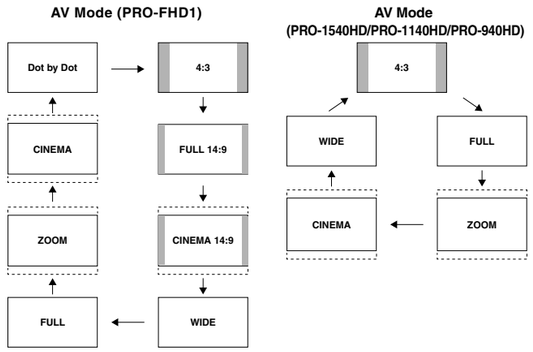
*Available with the PRO-FHD1 only

PC Mode for Non-XGA Signals

Item	Description
4:3	Fills the screen without altering the input signal aspect ratio.
FULL	Full 16:9 screen display.
Dot by Dot	Matches input signal with same number of screen pixels.

PC Mode for XGA Signals
(1024 x 768 input with PRO-1540HD and PRO-1140HD)

Item	Description
4:3	Matches input signal to the same number of screen pixels. Optimized for 1024 x 768 display.
FULL1	Full 16:9 screen display. Optimized for 1024 x 768 display.
FULL2	For wide signal display. Use when displaying 1360 x 768 signal resolution.



Multi-Window Display

Multi-Window Display of the Pioneer Elite PDPs takes dual-material viewing to new levels, letting you display a combination of NTSC, HDTV, and PC screens either as twin images (50/50 split screen) or as picture-in-picture, which allows you to position the subscreen upper left/right or lower left/right. The units also permit "picture-out-picture" display, which shows the small subscreen on the right side of the main screen. Watch pro football on TV, for example, right alongside fantasy football on your PC.

The Elite PDPs can even display a freeze frame of a broadcast. Just press the FREEZE button at the scene you want, and the screen is split to display a still image of the scene on the right, while continuing the broadcast on the left.

Multi-Window Display

2-screen (with PC) — Picture-in-picture

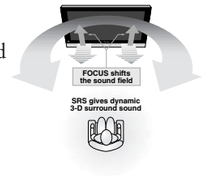
Closed Caption Compatibility

The Closed Caption works with television programs and home videos displaying the CC logo for closed captions. Closed captions allow the hearing-impaired to enjoy TV and videos on the PDPs through the use of subtitles displayed on screen.

The units also offer the "On If Mute" function. Choose "On If Mute" on the closed captions setup screen, and subtitles will automatically appear on the screen whenever the sound is muted. You can conveniently follow a program's story, for example, while talking on the phone.

The units deliver closed captioning from digital TV programs, too.

Three Surround Modes — SRS, TruBass, and FOCUS



To expand your sound options, the Elite PDPs feature three surround modes: SRS, for dynamic 3-D surround throughout an expansive listening area; TruBass for surprisingly big, natural bass sound; and FOCUS, which enhances the surround effect and shifts the sound field upward. The units also permit simultaneous activation of TruBass and SRS.

* SRS, TruBass and FOCUS are trademarks of SRS Labs. INC.

Subwoofer Output

The Elite PDPs comes with a subwoofer output terminal. This lets you enjoy deeper bass with easy connection.

Speaker Systems

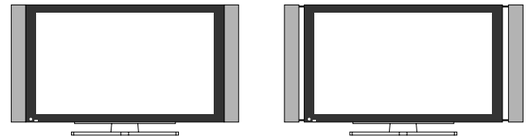
The optional speaker system — PDP-S50 for 50" panels — match the slim designs of the display panels, while still delivering superior sound. The speakers can be installed in two different ways:

Flush: The speakers are fixed flat against the sides of the display panel.

Air: The speakers are mounted slightly separate from the sides of the display panel, delivering a wider sound field.

An optional speaker system for 60" panels — PDP-S51* — is also available.

* This speaker system permits Flush installation only.



Flush — Air

■ Accessories (PRO-FHD1)

Power cord (6.6 ft. / 2 m) x 1
Remote control unit x 1
AA (R6) batteries x 2
Cleaning cloth x 1
Speed clamps x 2
Bead bands x 2
BNC/Pin conversion adapter x 3
Warranty x 1
Operating instructions x 1

Note: Design and specifications are subject to change for improvements without notice.

■ Accessories (PRO-1540HD/PRO-1140HD/PRO-940HD)

Power cord (6.6 ft. / 2 m) x 1
G-LINK cable (9.8 ft. / 3 m) x 1
Remote control unit x 1
AA (R6) batteries x 2
Cleaning cloth x 1
Speed clamps x 3
Bead bands x 3
Ferrite core x 1
Hexagonal wrench x 1 (PRO-940HD only)
Terminal position sheet* x 1 (PRO-1540HD only)
Warranty x 1
Operating instructions x 1

* For use when mounting the PDP on the wall.

Note: Design and specifications are subject to change for improvements without notice.

■ RS-232C Command List (PRO-FHD1)

Command	Command Name	Function
PON	POWER ON	Power ON
POF	POWER OFF	Power OFF
INP	INPUT	Switch between Inputs
SSI	SUB INPUT	Switch between Subscreen Inputs
VOL	VOLUME	Adjust the Volume
AMT	AUDIO MUTE	Set Audio Mute
SZM	SCREEN SIZE	Switch between Screen Sizes
AVS	AV SELECTION	Switch between AV Selection Modes
MST	MULTI SCREEN	Switch between Multi-Screen Modes
OSD	OSD	OSD Display ON/OFF
FCS	FOCUS	Surround Mode: FOCUS
SRS	SRS SURROUND	Surround Mode: SRS SURROUND
TBS	TRU-BASS	Surround Mode: TruBass
PUC	PURE CINEMA	Select PureCinema
CTP	COLOR TEMP	Set Color Temperature
DNR	DNR	Set Digital Noise Reduction
MNR	MPEG NR	Set MPEG Noise Reduction
GMM	GAMMA	Set Gamma
IID	ISF INFO	Display ISF Information

■ RS-232C Command List (PRO-1540HD/PRO-1140HD/PRO-940HD)

Command		Function
AMT	S00	AUDIO Mute OFF
AMT	S01	AUDIO Mute ON
AVS	S01	AV Selection : STANDARD
AVS	S02	AV Selection : DYNAMIC
AVS	S03	AV Selection : MOVIE
AVS	S04	AV Selection : GAME
AVS	S06	AV Selection : PURE
AVS	S07	AV Selection : USER
AVS	S08	AV Selection : ISF-DAY
AVS	S09	AV Selection : ISF NIGHT
CHN	FWD/REV	Switch Preset Channel
FCS	S00	FOCUS OFF
FCS	S01	FOCUS ON
FWD		Preset ch (1 step forward)
GDI		Get Command for Status
INP	S01	INPUT1 (Main Screen)
INP	S02	INPUT2 (Main Screen)
INP	S03	INPUT3 (Main Screen)
INP	S04	INPUT4 (Main Screen)
INP	S05	INPUT5 (Main Screen), HDMI
INP	S06	INPUT6 (Main Screen), HDMI
INP	S07	INPUT7 (Main Screen), PC
INA	***	INPUT Antenna A *** ch (Analog/Digital Terrestrial Broadcast)
INB	***	INPUT Antenna B *** ch (Analog Terrestrial Broadcast)
MST	S00	Single-Window Display
MST	S01	Multi-Window : 2-screen(Main Screen Size : Normal)
MST	S02	Picture-in-Picture (Lower Right)
MST	S03	Picture-in-Picture (Upper Right)
MST	S04	Picture-in-Picture (Upper Left)
MST	S05	Picture-in-Picture (Lower Left)
MST	S06	Multi-Window : 2-screen(Main Screen Size : Medium)
MST	S07	Multi-Window : 2-screen(Main Screen Size : Large)
MST	S08	SWAP (Replace Subscreen for Picture-in-Picture)
OSD	S00	OSD Display OFF
OSD	S01	OSD Display ON
POF		Power OFF
PON		Power ON
REV		Preset ch (1 step backward)
SRS	S00	SRS OFF
SRS	S01	SRS ON
SZM	S00	Screen Size : Dot by Dot/PARTIAL
SZM	S01	Screen Size : 4:3
SZM	S02	Screen Size : FULL/FULL1080i
SZM	S03	Screen Size : ZOOM
SZM	S04	Screen Size : CINEMA
SZM	S05	Screen Size : WIDE
TBS	S00	TRUBASS OFF
TBS	S01	TRUBASS ON
VOL		Vol ***
VMT	S00	VIDEO Mute OFF
VMT	S01	VIDEO Mute ON

■ RS-232C Supplementary Command List (PRO-FHD1)

Command	Function
UP1, 5	Increase Adjustment Value by 1, 5
UP0	Increase Adjustment Value by 10
UPF	Select the Maximum Adjustment Value
DW1, 5	Reduce Adjustment Value by 1, 5
DW0	Reduce Adjustment Value by 10
DWF	Select the Minimum Adjustment Value

■ RS-232C Supplementary Command List (PRO-1540HD/PRO-1140HD/PRO-940HD)

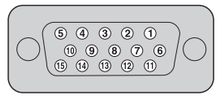
Command	Function
UP1,5	Increase Adjustment Value by 1,5
UP0	Increase Adjustment Value by 10
UPF	Select the Maximum Adjustment Value
DW1,5	Reduce Adjustment Value by 1,5
DW0	Reduce Adjustment Value by 10
DWF	Select the Minimum Adjustment Value

■ Specifications (Display Panels)

	PRO-FHD1	PRO-1540HD	PRO-1140HD	PRO-940HD
Light Emission Panel	50-inch plasma display panel	60-inch plasma display panel	50-inch plasma display panel	42-inch plasma display panel
Number of Pixels	1920 x 1080	1365 x 768	1365 x 768	1024 x 768
Power Supply	120 V AC, 60 Hz	120 V AC, 60 Hz	120 V AC, 60 Hz	120 V AC, 60 Hz
Standby Power Consumption	0.3 W	30 W	26 W	26 W
Power Consumption	420 W	460 W	355 W	312 W
External Dimensions (W x H x D)	50-15/32" x 29-9/16" x 3-7/8" (1282 x 750.5 x 98 mm)	57-7/8" x 34-21/32" x 4-21/32" (1470 x 880 x 118 mm)	48-3/16" x 28-1/4" x 4-1/2" (1224 x 717 x 115 mm)	40-15/16" x 26-3/4" x 4-1/2" (1040 x 679 x 115 mm)
Weight	87 lbs. 12 oz. (39.8 kg)	113.6 lbs. (51.5 kg)	75.7 lbs. (34.3 kg)	Main unit: 64.4 lbs. (29.2 kg) Stand (incl. bolts): 5.5 lbs. (2.5 kg) Total: 69.9 lbs. (31.7 kg)

■ Signal Assignment of PC Input (15-pin Mini D-sub Connector) (PRO-1540HD/PRO-1140HD/PRO-940HD)

Pin No.	Signal
1	R
2	G
3	B
4	Not connected
5	Not connected
6	GND (ground)
7	GND (ground)
8	GND (ground)
9	+5V
10	GND (ground)
11	Not connected
12	SDA
13	HD
14	VD
15	SCL



Front View

■ Color System and Terminals (PRO-FHD1)

Color System		PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
Terminals	INPUT 1	DVI (DVI-D)
	INPUT 2	HDMI*
	INPUT 3	HDMI*
	INPUT 4	BNC (Component Video or Analog RGB)
	INPUT 5	S-Video
	INPUT 6	Video

*Supports HDMI 1.1 and HDCP 1.1.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital content that use Digital Visual Interface (DVI).

■ Built-in Media Receiver (PRO-1540HD/PRO-1140HD/PRO-940HD)

Reception System (Digital)			ATSC Digital TV System
	Circuit Type		8VSB/64QAM/256QAM/QPSK demodulation
	Tuner	VHF/UHF	VHF 2ch to 13ch, UHF 14ch to 69ch
		CATV	Ch. 2 to 135
	Audio Format		Dolby Digital
Reception System (Analog)			American TV standard NTSC system
	Circuit Type		Video signal detection PLL full synchronous detection, PLL digital synthesizer system
	Tuner	VHF/UHF	VHF Ch. 2 to 13, UHF Ch. 14 to 69
		CATV	ANTENNA/CABLE A IN: Ch. 1 to 135 Cable: Ch. 1 to 125
	Audio Multiplex		BTSC system
Terminals	Rear	ANTENNA/CABLE A IN	75 ohms UNBAL, F type for DTV/VHF/UHF/CATV in
		ANTENNA B	75 ohms UNBAL, F type for VHF/UHF/CATV in loop out
		INPUT 1	S-Video input, Video input, Audio input
		INPUT 2	Component Video input, S-Video input, Video input, Audio input
		INPUT 3	Component Video input, Audio input
		PC	Analog RGB input, Audio input
		INPUT 5	HDMI input*, Audio input
		INPUT 6	HDMI input*, Audio input
		MONITOR OUT	Video output, Audio output
		Digital Audio Output	Optical
		G-LINK	1
		ETHERNET	1
		CONTROL IN	1
		CONTROL OUT	1
		SPEAKER (except PRO-940HD)	8 ohms to 16 ohms
		SUBWOOFER OUTPUT	Variable
		CableCARD	Point of Deployment
	Side	INPUT 4	Component Video input, Video input, Audio input
		USB	USB input**
OSD			English/French/Spanish

*Supports HDMI 1.1 and HDCP 1.1.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital content that use Digital Visual Interface (DVI).
** Supports USB 1.1 and USB 2.0.

■ PC Signal Compatibility Table (PRO-FHD1)

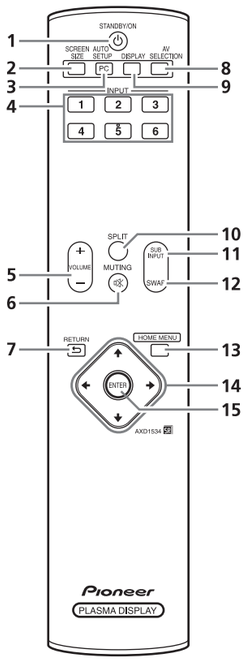
Resolution	Frequency
720 x 400	70 Hz
640 x 480	60 Hz
	72 Hz
	75 Hz
800 x 600	60 Hz
	72 Hz
	75 Hz
1024 x 768	60 Hz
	70 Hz
	75 Hz
1280 x 720	60 Hz
1280 x 768	60 Hz
1280 x 1024	60 Hz

Note: INPUT 1 (DVI) also supports 1280 x 1024 at 75 Hz, and 1920 x 1080 at 60 Hz signals.

■ PC Signal Compatibility Table (PRO-1540HD/PRO-1140HD/PRO-940HD)

Resolution	Frequency
720 x 400	70 Hz
640 x 480	60 Hz
	72 Hz
	75 Hz
800 x 600	56 Hz
	60 Hz
	72 Hz
	75 Hz
1024 x 768	60 Hz
	70 Hz
	75 Hz
1360 x 768	60 Hz

■ Functions of the Remote Control Buttons



PRO-FHD1

1 **STANDBY/ON:** Press to put the unit in operation or standby mode.

2 **SCREEN SIZE:** Press to select a screen size.

3 **PC AUTO SET UP:** When using PC signal input, press this button and the unit automatically sets the "Position", "Clock" and "Phase" to optimum values.

4 **INPUT 1** to **6:** Press to select the input.

5 **VOLUME (+ / –):** For adjusting the volume.

6 **MUTING:** Press this to mute the sound.

7 **RETURN:** Restores the previous menu screen

8 **AV SELECTION:** Use this to select the AV function.

9 **DISPLAY:** Press this to view the unit's current input and setup mode.

10 **SPLIT:** Press this to switch to multi-screen display.

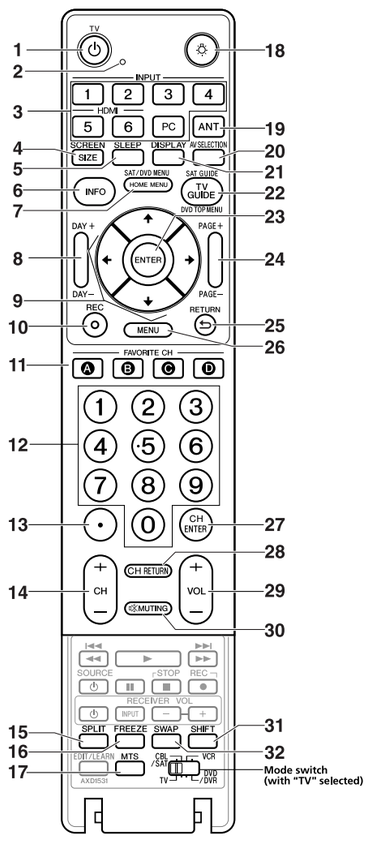
11 **SUB INPUT:** During multi-screen display, use this button to change inputs to subscreens.

12 **SWAP:** During multi-screen display, use this button to switch between main screen and subscreen.

13 **HOME MENU:** Press this button to open and close the on-screen menu.

14 **ADJUST (▲ / ▼ / ◀ / ▶):** Use this to navigate menu screens and to adjust various settings on the unit.

15 **ENTER:** Press this to adjust or enter various settings on the unit.



PRO-1540HD/PRO-1140HD/PRO-940HD

The following functions are available when the Mode is set to "TV".

1 **TV** ⏻ **:** Turns ON the Plasma Display Panel or places it in Standby.

2 Transmission confirmation LED

3 **INPUT :** Selects an input source for the Plasma Display Panel. (INPUT 1, INPUT 2, INPUT 3, INPUT 4, INPUT 5, INPUT 6 and PC)

4 **SCREEN SIZE:** Selects the screen size.

5 **SLEEP:** Sets the sleep timer.

6 **INFO:** Displays a channel banner when a TV program is being watched. *(When the TV Guide On Screen™ system is in operation, information about the currently highlighted channel appears on screen (when available).)*

7 **HOME MENU:** Displays the Home Menu screen

8 **DAY + / – :** Jumps to the next or previous day of program listings in the TV Guide On Screen™ Listing service.

9 **(▲ / ▼ / ◀ / ▶):** Selects a desired item on the menu screen.

10 **REC:** Triggers recording to a connected VCR when using the TV Guide On Screen™ System.

11 **FAVORITE CH (A, B, C, D):** Selects any of the four preset channels. *While watching, toggle the set channels by pressing **A**, **B**, **C** and **D**.*

12 **0 – 9:** Selects the channel.

13 **. (dot):** Enters a dot. *When entering the number of a sub-channel.*

14 **CH + / – :** Selects the channel.

15 **SPLIT:** Switches the screen mode: 2-screen, picture-in-picture, single-screen.

16 **FREEZE:** Freezes a frame from a moving image. *Press again to cancel the function.*

17 **MTS:** Selects MTS/SAP or language depending on the program being watched.

18 ☼ **:** Lights up all buttons. *Lights turn off if no operations are performed within 5 seconds. This is used for remote control use in a dark room.*

19 **ANT:** Selects the antenna (A, B).

20 **AV SELECTION:** Selects audio and video settings. (AV mode: STANDARD, DYNAMIC, MOVIE, GAME, PURE, USER. PC mode: STANDARD, USER)

21 **DISPLAY:** Displays the channel information.

22 **TV GUIDE:** Displays the TV Guide On Screen™ system.

23 **ENTER:** Executes a command.

24 **PAGE + / – :** (for the TV Guide On Screen™ system): *Scrolls the program listing screen vertically.*

25 **RETURN:** Returns to the previous menu screen.

26 **MENU:** Displays a panel menu in the TV Guide On Screen™ system.

27 **CH ENTER:** Executes a channel number.

28 **CH RETURN:** Returns to the previous channel. *This button is disabled while the TV Guide On Screen™ system is displayed.*

29 **VOL + / –:** Sets the volume.

30 🔇 **MUTING:** Mutes the sound.

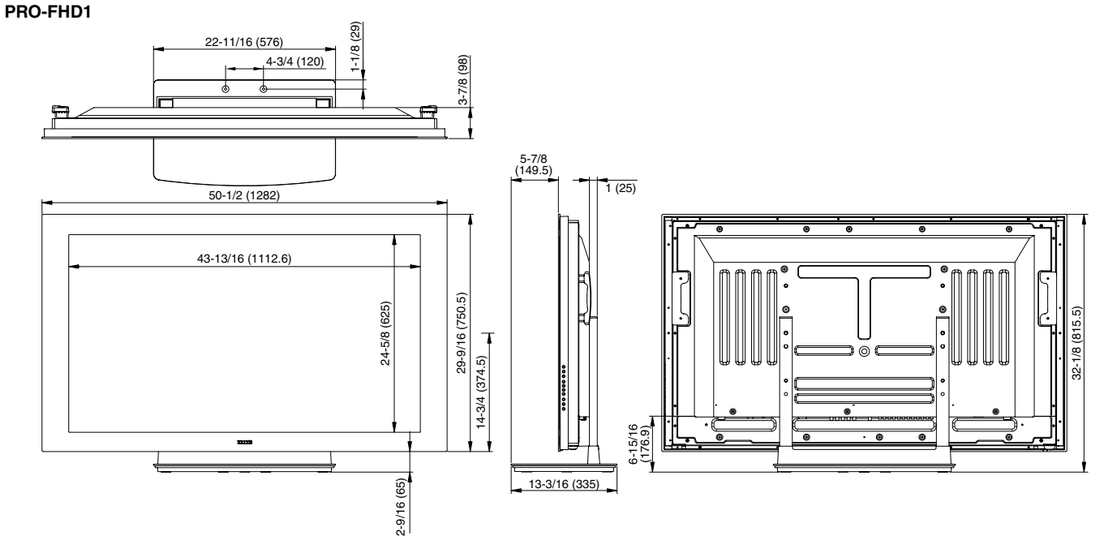
31 **SHIFT:** Moves the small screen to a different location when in the picture-in-picture mode.

32 **SWAP:** Switches between the two screens when in the 2-screen or picture-in-picture mode.

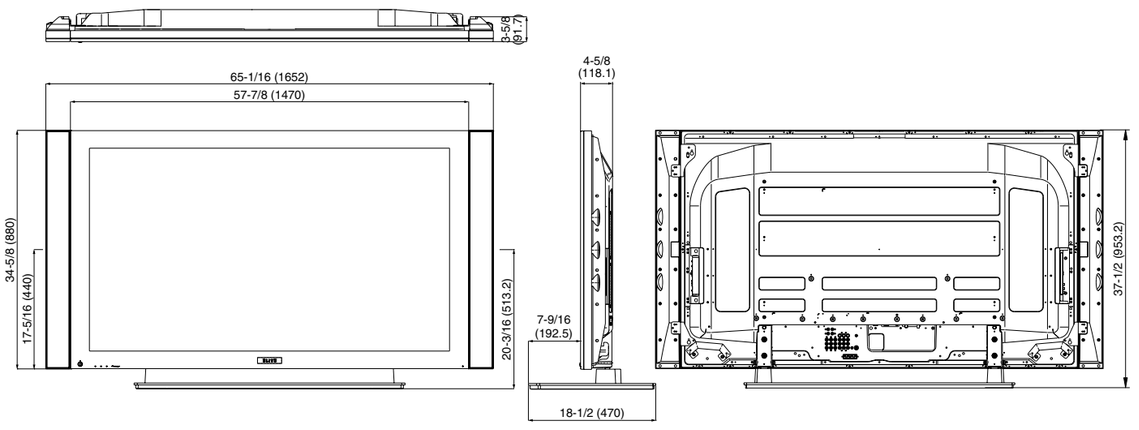
■ DIMENSIONS

Unit: inch (mm)

PRO-FHD1



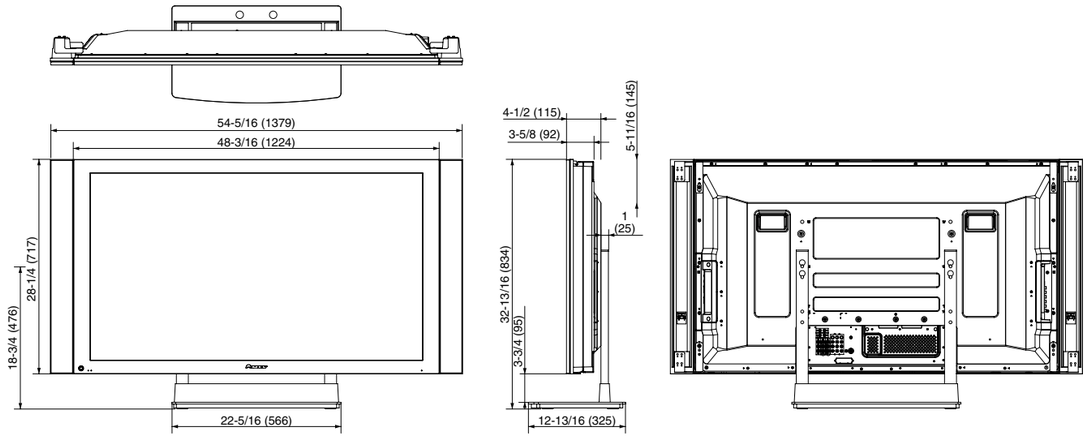
PRO-1540HD



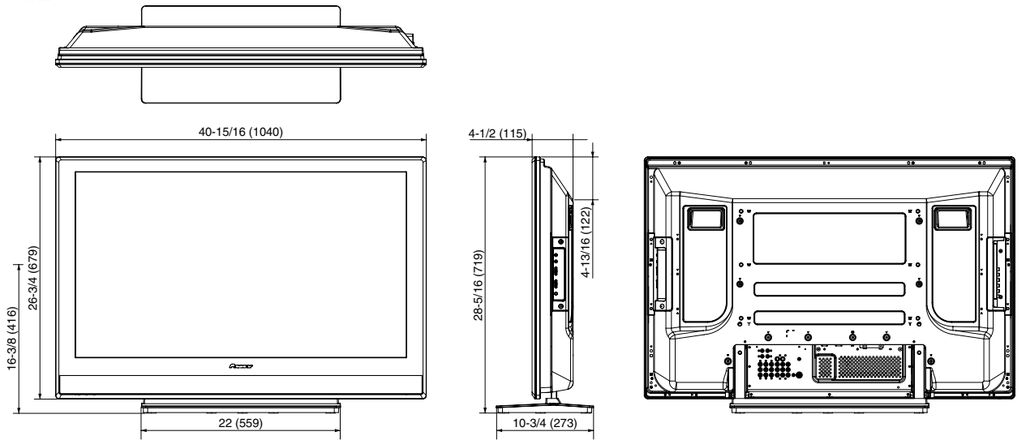
■ DIMENSIONS

Unit: inch (mm)

PRO-1140HD

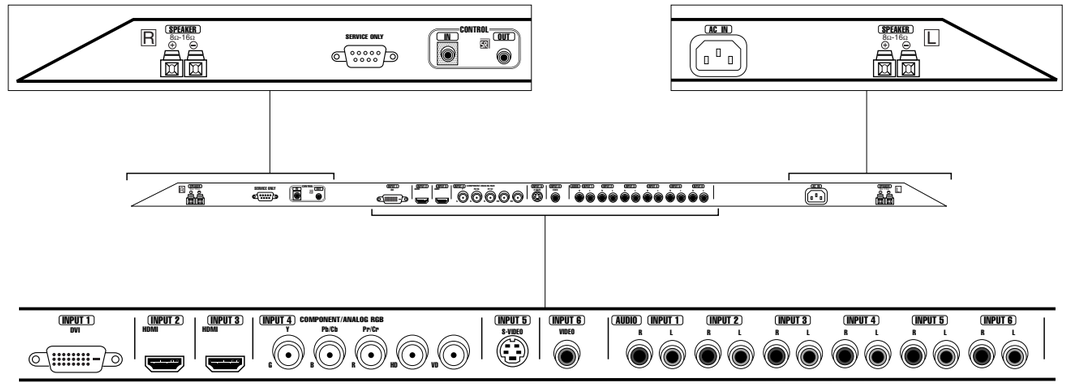


PRO-940HD

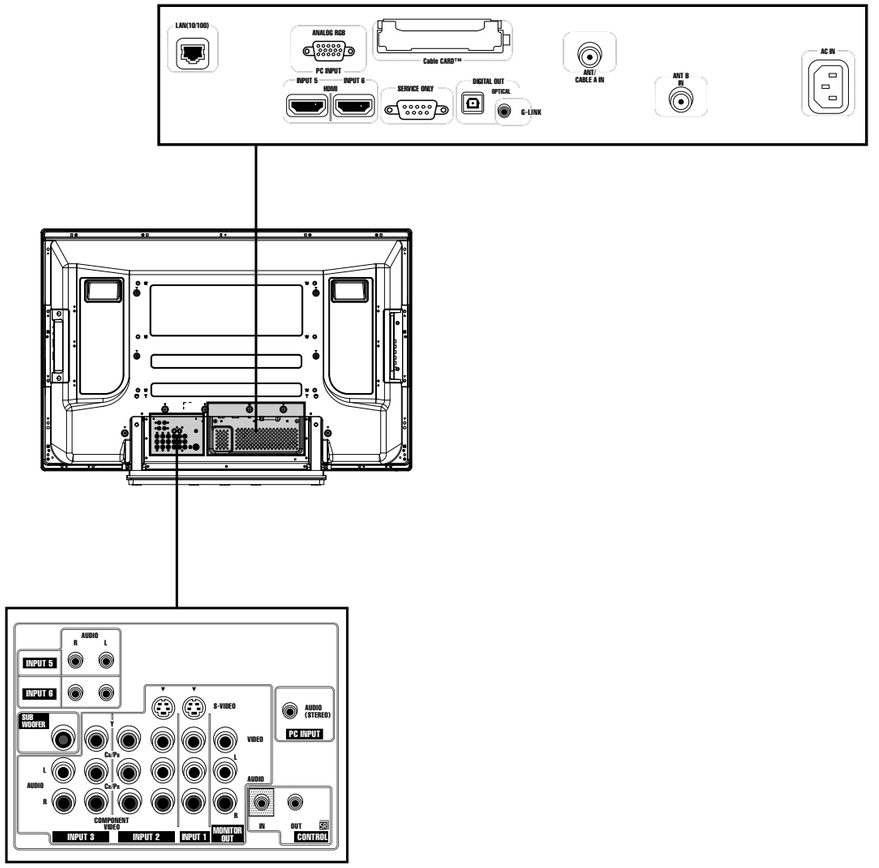


■ INPUT/ OUTPUT TERMINALS

PRO-FHD1



PRO-1540HD/PRO-1140HD/PRO-940HD



Blu-ray DISC PLAYER

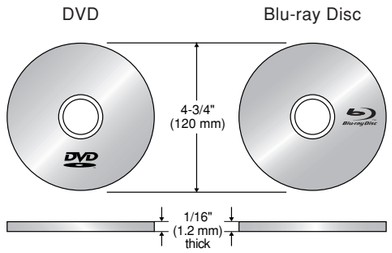
Blu-ray — The Next-Generation Optical Disc Format

Blu-ray Disc® — Same Size, Larger Capacity

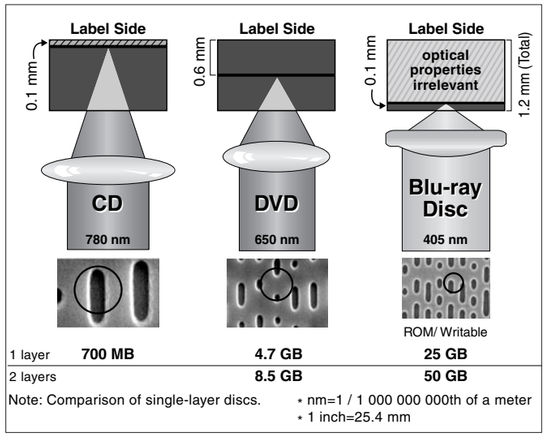
Blu-ray Discs are the latest and most advanced optical disc technology. Pioneer is one of the companies that helped create this new disc format, which is expected to replace DVD as a major source of audio-visual content. Despite a similar look and size, Blu-ray Discs boast much larger capacity and higher audio and video quality than CD and even DVD.

As the name "Blu-ray" indicates, the new technology uses a blue-violet laser, while current optical disc technologies — such as DVD, DVD±R, DVD±RW, and DVD-RAM — use a red laser to read and write data. The benefit of using a blue-violet laser (405 nm*) is that it has a shorter wavelength than a red laser (650 nm), which makes it possible to focus the laser with even greater precision. This allows data to be packed more tightly and stored in a smaller space, fitting more data than a CD/DVD, even though they are the same size. A single Blu-ray Disc can store 25 GB of data per layer, allowing 50 GB of data on a dual layer Blu-ray Disc. This means a single-layer disc can contain five times more information than a DVD**, enabling movie studios to include more information for superb picture and sound quality. For TV programs, one Blu-ray disc can hold up to two hours of HDTV material (or eleven hours of SDTV material)***.

Blu-ray Discs support:
- 1920 x 1080 HD (50i, 60i, and 24p)
- 1280 x 720 HD (50p, 60p, and 24p)
- 720 x 576 / 480 SD (50i or 60i)



Lasers and Beam Spots — CD, DVD, and Blu-ray Disc



Superb Audio

In addition to excellent pictures, the large capacity and data transfer rate of Blu-ray Discs permit extremely high-quality audio (up to 8 channels) to accompany HD video. Final audio specifications include DTS (core format), Dolby Digital, and Linear PCM (up to 96/24). As options, the format is expected to support Linear PCM 192/24 6.

* nm = 1 / 1 000 000 000th of a meter (a meter is about 3.281 feet).
** Based on a 25 GB single layer Blu-ray disc versus a 4.7 GB single layer DVD disc.
*** Recording capacity based on average pressed DVD-Video bit rates.
Note: Blu-ray Disc and the Blu-ray Disc logo are trademarks of Sony Corporation.

Specifications: Blu-ray vs. DVD

Parameters	Blu-ray	DVD
Storage Capacity	25 GB (single-layer) 50 GB (dual-layer)	4.7 GB (single-layer) 8.5 GB (dual-layer)
Laser Wavelength	405 nm (blue laser)	650 nm (red laser)
Numerical Aperture (NA)	0.85	0.60
Disc Diameter	4-3/4" (120 mm)	4-3/4" (120 mm)
Disc Thickness	1/16" (1.2 mm)	1/16" (1.2 mm)
Protection Layer	1/192" (0.1 mm)	1/32" (0.6 mm)
Hard Coating	Yes	No
Track Pitch	0.32 µm	0.74 µm
Data Transfer Rate (Data)	36.0 Mbps (1x)	11.08 Mbps (1x)
Data Transfer Rate (Video/Audio)	54.0 Mbps (1.5x)	10.08 Mbps (<1x)
Max. Video Resolution	1920 x1080 (1080p)	720 x 480 / 720 x 576 (480i / 576i)
Max Video Bit Rate	40.0 Mbps	9.8 Mbps
Video Codecs	MPEG-2 MPEG-4 AVC SMPTE VC-1	MPEG-2 – –
Audio Codecs	Linear PCM Dolby Digital DTS Digital Surround	Linear PCM Dolby Digital DTS Digital Surround
Interactivity	BD-Java	DVD-Video

BD Java® Technology for Enhanced Interactive Features

In addition to tremendous picture and sound quality, the Blu-ray Disc format provides unprecedented access and interactivity. This is made possible by Java® technology, which permits the following features:
- Picture-in-picture display
- Changing the point of view — You can watch a game from the field or the point of view of the players, or get on the stage at a concert.
- Changing camera angles — You can even move the camera angle to different areas of the screen in real time.

* Java and all JAVA-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. ©2006 Esmertec AG

1080p Home Theater from Pioneer

Create a 1080p Home Theater System with Pioneer Elite Components

For the first time in the world, a comprehensive range of components for creating a 1080p home theater system is now available — thanks to Pioneer. These innovative products are composed of the latest Elite audio-video components, one of which is the BDP-HD1 Blu-ray Disc Player.

Connect the system directly with the PRO-FHD1 Elite Plasma Display Panel (PDP) or Elite A/V receiver, via an HDMI terminal. With its ability to play HD content from Blu-ray Discs, and precise all-digital signal transmission, the BDP-HD1 lets you take full advantage of the PDP's 1080p resolution. In addition, the Elite player can even upscale the resolution of your standard DVD collection, so that all your movies look better than ever.

The BDP-HD1 Blu-ray Disc Player also delivers 1080p movie sources without changing their original 24 frames per second (fps) to an unsynchronized 60fps. Then the PRO-FHD1 changes them to 72fps (Advanced PureCinema with 3-3 Pull Down) — creating three copies for every frame. This means that output pictures perfectly synchronize with the original film. You can enjoy movies with real-theater quality while sitting in your living room.

HDMI (High-Definition Multimedia Interface)

The BDP-HD1 comes with an HDMI terminal — a key element of Pioneer's 1080p home theater system. HDMI boasts a high bit rate of up to 2.2 Gbps for HD content and can process large amounts of uncompressed, high-quality data. As a result, it can transmit high definition signals, including 720p, 1080i, and 1080p, as well as standard definition signals. This ensures compatibility with a variety of sizes, resolutions, and formats.

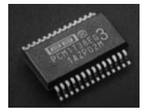
HDMI also transmits the signal to the display in a pure digital state — without D/A or A/D conversion — and eliminates loss of video (and audio) quality.

In addition, HDMI combines video and multi-channel audio into a single cable, and connects to any other devices with an HDMI output.

Connect the BDP-HD1 directly to a PRO-FHD1 Elite Plasma Display Panel or to our new Elite A/V receivers — VSX-84TXSi, VSX-82TXS, VSX-81TXV, or VSX-80TXV — via HDMI, without all those messy cables. Other new Elite Plasma Display Panels — PRO-1540HD, PRO-1140HD, and PRO-940HD — also come with HDMI terminals.

Advanced Devices and Constructions

Burr-Brown 192 kHz/24-bit Audio D/A Converter

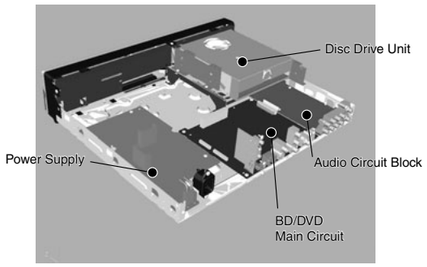


The BDP-HD1 uses a high-performance 192 kHz/24-bit audio D/A converter (Burr-Brown PCM1738) for each of the 6 channels. This ensures superior-quality multi-channel sound. For more accurate sound, the symmetrically-placed circuits of the front L/R channels work in synergy with this superb performance. In addition, the converter uses an exclusive power supply for the DAC to reduce interference from other circuits. The output from the DAC is a differential-current configuration to suppress common-mode noise.

Advanced Construction

The internal construction of the BDP-HD1 features a unique layout of blocks and wiring that ensures mechanical strength and better heat radiation efficiency. This improves video and sound quality.

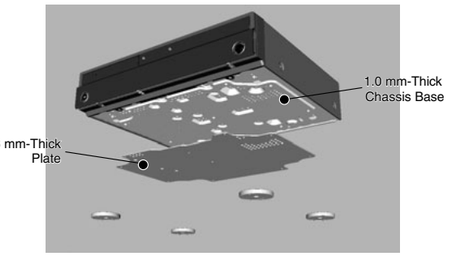
Multi-Faceted Internal Construction



The BDP-HD1 also features a dual-layered chassis. The 1.0 mm-thick* chassis base is reinforced with a 1.6mm-thick plate. This improves strength and stability, to eliminate spurious vibrations. The result is better signal readout accuracy and superior video and audio quality.

*1 inch = 25.4 mm

Dual-Layered Chassis



Enhanced Convenience

Expanded Range of Playable Formats

The BDP-HD1 plays pre-recorded titles from BD-ROM. And because Blu-ray Discs are the same size as DVD, DVD-R, and DVD-RW, the unit is backward-compatible with upscaled resolution.

For the latest product specifications, please visit:
http://www.pioneerelectronics.com

*Some discs will not play content in HD through a component video output. See Blu-ray Disc packaging for details.

Home Media Gallery With DLNA Certification and Windows Media Connect Compatibility

Digital devices for home use are increasingly popular, and people are consuming and creating digital content at a much higher rate than ever. Not only has the variety of content increased, but also the variety of audio and video formats. Pioneer's Home Media Gallery function brings all of this into your living room. This Elite-exclusive function lets you play digital videos, digital still photos, and compressed music files stored in your PC — or multiple PCs — even when the PC is located in another room. Connect the BDP-HD1 to your home network, and the system automatically seeks out (for example) your WMV or MPEG2 videos, JPEG still photos, and MP3 or WMA music files, and plays them via your audio-visual system. Extremely easy operation is ensured by an intuitive on-screen GUI, easy-to-read displays, and user-friendly remote control. Home Media Gallery even allows playback of HD content from your PC with up to 1920 x 1080p resolution.

In addition, the Home Media Gallery is designed to DLNA (Digital Living Network Alliance) guidelines. This means the BDP-HD1 can play networked music, videos, and photo files from other DLNA 1.0-compliant devices, regardless of the brand.

Microsoft Windows Media Connect is a new technology that lets you deliver music, photos, and video stored on a PC to devices in your living room or other places. Download this freeware and enjoy access to all your PC archives at your fingertips.

The BDP-HD1 also allows playback of Microsoft PlaysForSure-protected content from a wide range of popular online movie and music service providers. Just look for the PlaysForSure logo.

*A previously existing or new home network, Microsoft Windows XP, and Microsoft Media Connect Software (free for licensed users of Microsoft Windows operating system through Windows updates) are required for all home network and Home Media Gallery features.
**The PlaysForSure logo, Windows Media, and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
***DRM (Digital Rights Management)-protected files on the server are not playable on this player and show up in the Home Media Gallery with a lock icon next to them.

A Wide Range of Terminals

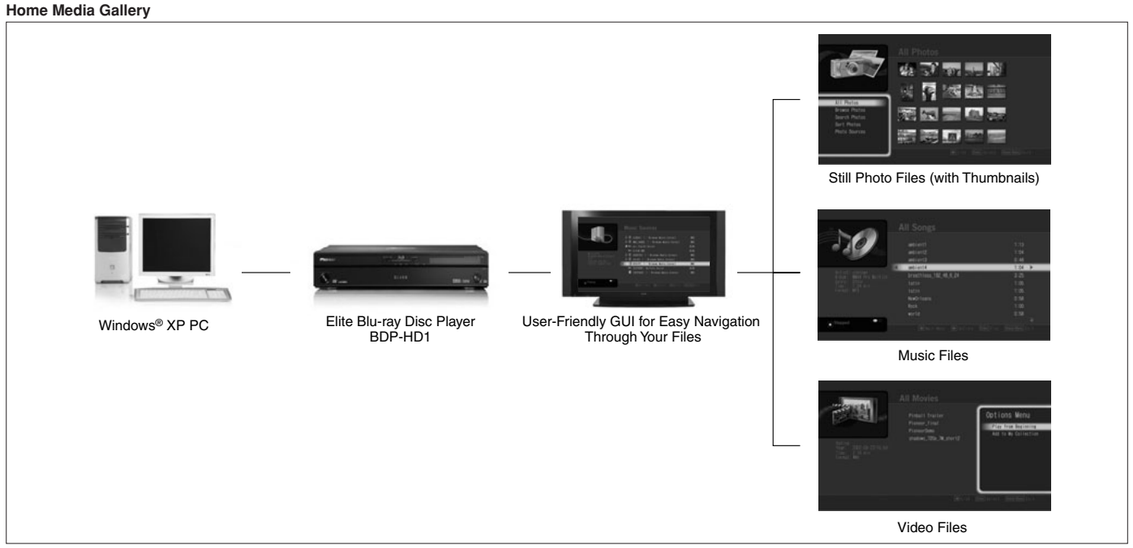
The BDP-HD1 comes with the following terminals:

HDMI	1
LAN (Ethernet 10 / 100BASE-T) (for connection with your home network in order to use the Home Media Gallery function.)	1
Component Video Output	1 (Gold Plated)
S-Video Output	1 (Gold Plated)
Video Output	1 (Gold Plated)
5.1-Channel Audio Output	1 (Gold Plated)
2-Channel Audio Output	1 (Gold Plated)
Coaxial Digital Output	1 (Gold Plated)
Optical Digital Output	1
Pioneer System Remote Input	1
IR Input	1

High-Grade Power Cable

A thicker, high-grade power cable is used with the BDP-HD1. This provides a steadier power supply, bringing out the maximum potential of the unit.

Home Media Gallery

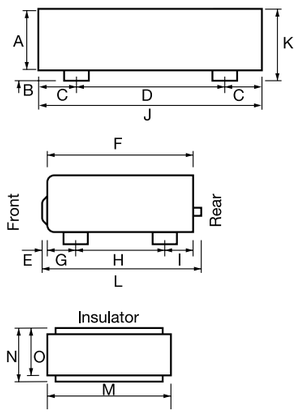


BD-ROM Regions

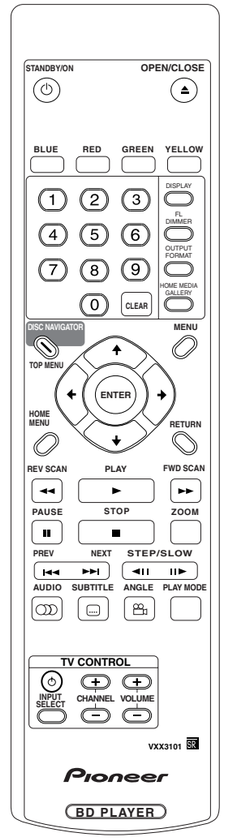
Like DVDs, BD discs (BD-ROM) carry a mark corresponding to a specific region(s) of the world. The BDP-HD1 also has a region mark on the rear panel. Discs from incompatible regions will not play on this player. Discs marked ALL can be played with any player. The diagram below shows the BD-ROM regions of the world.

■ DIMENSIONS

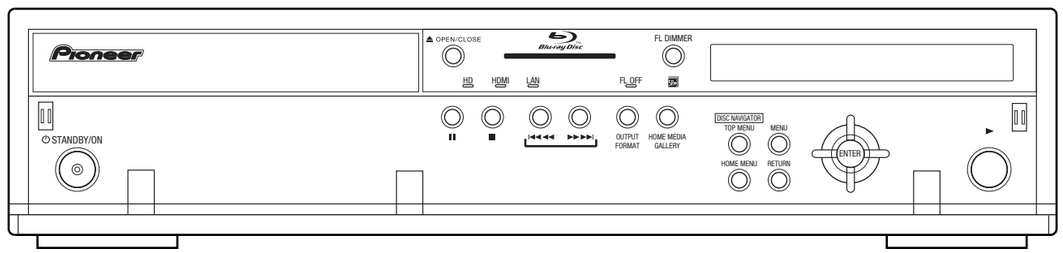
	BDP-HD1	
A	89 mm	3-1/2"
B	5 mm	3/16"
C	40 mm	1-9/16"
D	340 mm	13-3/8"
E	7.5 mm	5/16"
F	346 mm	13-5/8"
G	61 mm	2-3/8"
H	239 mm	9-7/16"
I	45 mm	1-3/4"
J	420 mm	16-9/16"
K	94 mm	3-11/16"
L	359 mm	14-1/8"
M	55 mm	2-3/16"
N	10 mm	3/8"
O	8.5 mm	5/16"



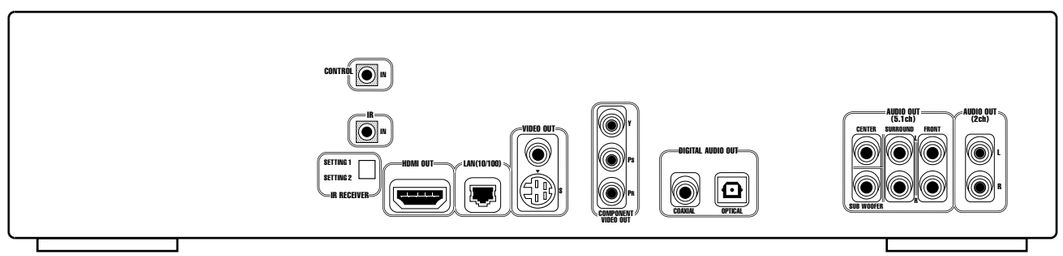
■ REMOTE CONTROL



■ FRONT PANEL



■ REAR PANEL



DVD PLAYERS

Elite DVD Players: Technological Highlights for 2006/2007

Pioneer Innovations for Stunning Picture Quality
- **Advanced Digital Direct Pixel Drive™ with VQE9**
- **108 MHz/14-bit Video D/A Converter**
- 2-3 Pull-down PureCinema Progressive Scan Technology
- Component Frame DNR (DVD/VCD) PRO
- Chroma Upsampling Error Reduction
- Super Fine Focus Digital Filter
- Viterbi Decoder

Technologies for Versatile Image Control
- Versatile Parameters for Video Control

Technologies for Astounding Sound Realism
- Solid Audio Circuit Block for Superior Sound
- Pure Audio On/Off
- Hi-Bit Legato Link Conversion PRO
- High-Bit Legato Link Conversion

Easy Operation
- **Dedicated Remote Keys for Switching Video Output**
- Jog/Joystick Remote Control
- On-screen GUI (Graphical User Interface)

Versatile Playback Functions
- **Playability of DivX® Files**
- **Photo + Music Mix (JPEG Slideshow with Music)**
- Condition Memory
- Continuous Play Memory
- Custom-File 300 DVD/CD Playback

Inputs and Outputs
- **HDMI Interface**
- i.LINK (IEEE1394)
- Steel Stabilizing Plate

Elaborate Mechanical Construction
- Triple-Layered Chassis
- Power-Supply Transformer for the Audio
- Z-Concept

Pioneer Innovations for Stunning Picture Quality

Advanced Digital Direct Pixel Drive™ with VQE9 — All-Digital 10-bit Signal Processing and Transmission with HDMI (DV-79AVi)

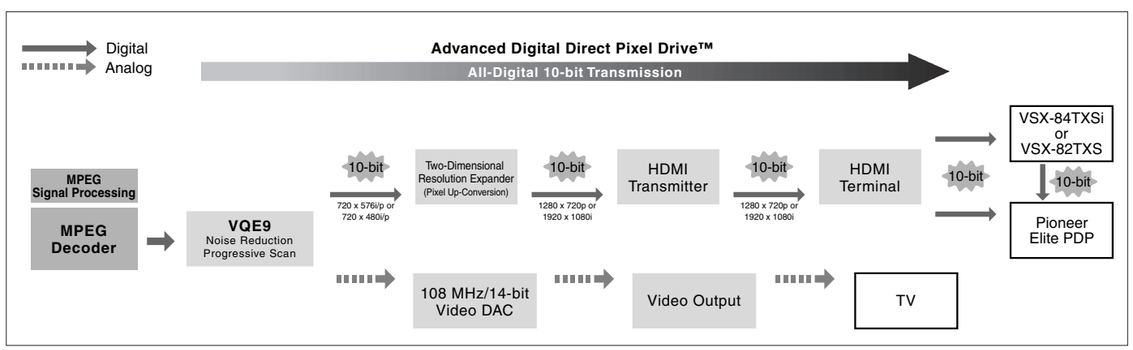
The DV-79AVi Elite DVD player features an upgraded version of the Pioneer-trademark Digital Direct Pixel Drive™. If you connect the player with a compatible A/V receiver or plasma display panel via the HDMI terminal, the advanced technology allows all-digital signal processing and transmission — with high 10-bit precision thanks to the "VQE9" video-encoding LSI. Because the signals remain digital, they are free from conversion loss, delivering pictures with less noise and finer details than those with analog conversion. The player also converts up pixels for HDMI output. (See the figure at the bottom of the page.)

VQE9 Video-Encoding LSI

The Advanced Digital Direct Pixel Drive™ features VQE9 video-encoding LSI. This state-of-the-art device allows expansion to 10 bits, and all the processes for improving picture quality are performed on a single chip, including:
- Effective noise reduction with Component Frame DNR Pro (see page 23 for details)
- Highly-precise motion detection for more natural textures and smoother edges of moving images from video sources
- A wide variety of picture adjustment options
- High-resolution progressive pictures (PureCinema Progressive Scan)

"Two-Dimensional Resolution Expander": Pixel Conversion IC for HDMI

The Advanced Digital Direct Pixel Drive™ also features the "Two-Dimensional Resolution Expander" pixel conversion IC, which up-converts traditional DVD video signals to high-definition resolution in the most appropriate way for the connected monitor or TV. When the Elite DVD player is connected to a DLP projector with 1280 x 720 pixels, for example, the pixel conversion IC up-converts the progressive 720 x 480 signals to progressive 1280 x 720 signals which exactly fit the pixel count of the projector. The signals generated by the MPEG decoder pass through the Two-Dimensional Resolution Expander, and then are output via HDMI to an HDMI-compatible monitor or TV.



108 MHz/14-bit Video D/A Converter (DV-79AVi)

When video signals are output to non-HDMI devices, the Elite DVD player uses the high-grade 108 MHz/14-bit video D/A converter. Combining 8x oversampling with high 14-bit precision, this premium device ensures superior linearity by preventing phase fluctuations. The converter also controls overshoot and undershoot without affecting the original signals, even when the picture has high contrast.

2-3 Pull-down PureCinema Progressive Scan Technology (DV-79AVi/DV-46AV)

Interlaced vs. Progressive Scanning

• Interlaced scan system — NTSC TV Standard

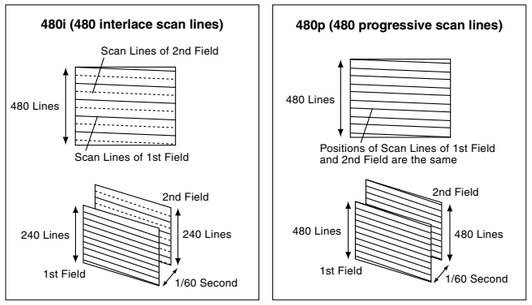
When you look at your TV screen close up, you will notice an image is made up of many horizontal lines. These are called scan lines: an image is painted on the screen by the scan lines that sweep from left to right, and top to bottom, in sequence. One screenful of TV picture is equivalent to a frame; by current NTSC TV standards there are 480 scan lines in each frame (480i).

All 480 scan lines that form an image are not sent to your TV at the same time; every other line is transmitted alternately every 1/60 second. In other words, in the first 1/60 of a second, odd-numbered lines (1st, 3rd, 5th, and so on), which total 240 and collectively form an odd-numbered field, are sent. In the next 1/60 of a second, even-numbered lines (2nd, 4th, 6th, and so on), which collectively form an even-number field, are transmitted to fill in the remaining space. In this way, a complete image, that is, a frame, is formed.

Such is NTSC interlaced scanning. With this system, lines are scanned for odd- and even-numbered fields alternately every 1/60 second, to build one frame every 1/30 second.

• Progressive scanning for double resolution of interlaced scanning

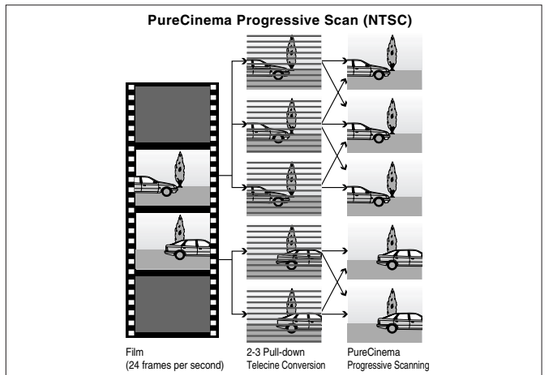
With interlaced scanning used by NTSC TV standards, the larger the display, the more noticeable the picture flicker. Progressive scanning was developed to solve this problem. With progressive scanning, all 480 lines are scanned from top to bottom in 1/60 of a second to build an entire frame (480p). With a progressive scan TV, the data for the odd- and even-numbered fields is stored in memory and undergoes field interpolation to convert from 30fps (frames-per-second) format to 60fps simulated format. Therefore, progressive scanning can provide double resolution of interlaced scanning, to present high-quality images with less flickering.



2-3 Pull-down PureCinema Progressive Scan Technology

Normally there are 24 frames per second (24fps) on film. On DVD, movies are recorded in the same 24fps format, each frame containing the data for the entire 480 scanning lines (480p) for progressive scanning. Pioneer's 2-3 Pull-down PureCinema Progressive Scan Technology is exactly the technique to take advantage of delicately nuanced images recorded by progressive scanning. DVDs hold the data for inverse telecine conversion: When playing back film-originated sources, Pioneer's advanced scanning technology makes use of the data and inserts additional frames accurately. This allows the viewer to enjoy natural, film-like images. Pictures are smooth and sharp, with high resolution, free of bothersome artifacts like jagged edges on moving objects.

Note: With the DV-46AV, PureCinema Progressive Scan directly turns 24fps progressive images from DVDs into 60fps progressive images. Because conventional progressive-interlace-progressive conversion is not used, this represents simpler, more efficient way of conversion.



Note: To enjoy the advantages of PureCinema Progressive Scan Technology, your TV must be compatible with D2 or higher component video formats. The RCA-pin type component video output offers purer colors and finer gradations.

Component Frame DNR (DVD/VCD) PRO (DV-79AVi)

DVD boasts a horizontal video resolution of more than 500 lines. Unfortunately, high resolution brings about a drawback of its own: minute noise is more visible. So Pioneer developed component frame cycling DNR (Digital Noise Reduction). It discriminates noise in each of the three components that comprise video signals — Y (luminance), PB and PR. Since it compares consecutive frames rather than consecutive fields, and processes individual components rather than composite signals, DNR provides superb noise reduction capability while retaining high resolution.

To further ensure higher video quality, Pioneer developed the advanced Component Frame DNR PRO. With the new version an optimum parameter is set for each of Y, PB and PR components to detect noise with higher precision. It's another reason the new Pioneer Elite DVD player delivers the quality that's much closer to the 35 mm film than ever.

Chroma Upsampling Error Reduction (DV-79AVi/DV-46AV*)

To record an entire movie or similar content on DVD, data must be compressed to fit the disc's 4.7 GB capacity. This process reduces the color information (chroma signals) to half that of the original, causing Chroma Upsampling Errors — which translates into poor color resolution, or "color blur" of the reproduced pictures. With the Pioneer Elite DVD players, an MPEG decoder effectively reduces the Chroma Upsampling Errors**, improving color fidelity and delivering much truer-to-original pictures than is possible with conventional DVD players.

*Only with progressive scan output.
**Reduction of Chroma Upsampling Errors is conducted only when the player determines that the loaded disc contains a movie source (24fps).

Super Fine Focus Digital Filter (DV-79AVi)

The Super Fine Focus Digital Filter sharply attenuates unwanted high frequencies without removing necessary video frequencies. This dramatically cuts video noise and boosts the horizontal resolution to over 540 lines to provide detailed, sharp pictures.

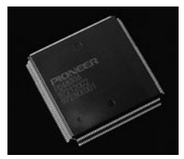
*DV-46AV: Applies to interlace signals only.

Viterbi Decoder (DVD) (DV-79AVi/DV-F07)

Pioneer Elite DVD players feature two processors for accurate conversion. The DVD decoder functions to suppress errors using Viterbi Decoding: high-quality signals are sent from the disc to the AV-1 MPEG decoder with superb reliability.

• Viterbi RF Decoding Process

The Viterbi Decoder boasts the ability to read data recorded on discs with exceptional precision. The Viterbi Decoder makes statistical calculations based on current, past and future data, predicts probable transition points, and performs waveform reshaping. Data is reproduced with high stability and accuracy.



DVD Decoder Chip with Viterbi RF Decoding Processing

• Accurate Digital Servo

This system detects the degree of disc warpage from the readout signal and automatically optimizes the focus and tracking servo gains, disc by disc, to reduce jitter and improve disc tracking ability.

Technologies for Versatile Image Control

Versatile Parameters for Video Control

Designed to deliver the best possible performance, the Video Adjust function features versatile image control for customized picture quality:

Progressive Motion: SLOW for static pictures, FAST for fast-moving pictures.

NR: Included are YNR and CNR, which reduce brightness and chroma noise, respectively. Frame DNR allows accurate noise reduction and elimination.

Sharpness: Allows well-focused, crisp images.

Detail: Sharpens the edges between high-contrast portions.

Black/White level: You can independently adjust the black level and white level for best contrast.

Hue: Adjusts the overall color of a picture.

Chroma level: Choose washed-out color or exaggerated, oversaturated color, or anything in between.

Chroma delay: Adjusts the timing between brightness and color to produce clarity of detail, removing blurriness and color smears. (DV-79AVi: Progressive sources only)

Gamma correction: Adjusts gradations by increasing or reducing the black level.

Black setup: Dark areas don't look muddy. You can see detail in dark scenes from progressive as well as interlace images.

Fine Focus: Sharpens or unsharpens the image.

Contrast: Sets the peak white level of the picture to stress or mute the difference between black level and white level.

Brightness: Adjusts the black level to provide an accurate image.

HDMI Detail: Adjusts the sharpness of edges in the HDMI video signal.

Moreover, you can adjust picture images to your liking — (TV (CRT), PDP and PROFESSIONAL with the DV-79AVi (analog video output) ; DIRECT, NATURAL and ENHANCED with the DV-79AVi (HDMI output); NORMAL, SPORTS and ART with the DV-F07) — and store three sets of combined parameters in memory.

	DV-79AVi	DV-46AV	DV-F07**
Progressive Motion	●		
NR (Noise Reduction)			
Brightness NR (YNR)[4)]	●		
Chroma NR (CNR)[4)]	●		
Frame Digital NR (DNR)			●
Block Noise Reduction (BNR)		●	
Sharpness	● (High & Mid)	●[1)]	●
Detail	●		●
Black/White Level	●		
Hue	●	●[1)]	
Chroma Level	●	●[1)]	
Chroma Delay	●[2)]		●
Gamma Correction	●	●	●
Black Setup	●		
Contrast		●[1)]	
Brightness		●[2)]	
HDMI Detail	●[3)]		

* Applies to interlace unless otherwise noted: 1) progressive/interlace, 2) progressive, 3) with HDMI output only.
** The DV-F07 does not feature progressive output.

Technologies for Astounding Sound Realism

Solid Audio Circuit Block for Superior Sound (DV-79AVi)

• All the decoding functions for DVD-Audio, DVD-Video and DTS are integrated in a single AV decoder chip. This allows simple and straightforward layout of signal paths.

• A DSP is used for configuring speaker systems, with Bass Management, gain control, and the distance in 0.5-foot increments adjusted accurately for DVD-Audio. All these parameters are available for SACD except for distance. It's also possible to choose "SMALL" for front speakers.

• Signals of 2-channel Linear PCM sources (CD, for instance) may be set to bypass the DSP by the CD DIRECT switch to ensure high-quality signal transfer.

• Each of the six channels features a 192 kHz/24-bit D/A converter that accepts 192 kHz PCM data and DSD (Direct Stream Digital) data directly. High-performance Super DAC (Burr-Brown PCM1738EG) is used for the front channels with DV-46AV, and for all the six channels with the DV-79AVi. Moreover, the output from the DAC is a differential-current configuration to suppress common-mode noise.

• Low-impedance capacitors are used in the power supply to reduce noise.

Pure Audio On/Off (DV-79AVi)

Pure Audio provides the optimal conditions for reproducing analog audio. Turn the Pure Audio on, and the Elite DVD player automatically stops the signal transmission through Video output, HDMI, i.LINK, and Digital Audio outputs, and turns off the fluorescent display. This prevents the analog audio signals from being affected by interference from those circuits.

*Pure Audio is activated when playback starts.

Hi-Bit Legato Link Conversion (DV-F07) Hi-Bit Legato Link Conversion PRO (DV-79AVi)

In the process of recording and mastering a CD, low-level signals — signals lower than LSB (Least Significant Bit) of a CD's 16-bit system — are removed. But the absence of low-level signals causes quantization noise, resulting in a stepped waveform of converted analog signals — proof that reproduced sound is quite unlike the original. Hi-Bit Legato Link Conversion combines Pioneer-developed bit expansion technology with Legato Link for still better musical reproduction. This conversion process results in a waveform which is both smoother and closer to the original than conventional technology allows. The DV-79AVi comes with Hi-Bit Legato Link Conversion PRO that upsamples the audio signals of CDs and DVDs to 176.4 kHz (from 44.1 kHz) and 192 kHz (from 48 kHz or 96 kHz), respectively. This processing extends the frequency response and improves transient response for wide-range sound.

Easy Operation

Dedicated Remote Control Keys for Switching Between Video Output Settings (DV-46AV)

The DV-46AV's remote control has dedicated keys for easily switching between video output settings. When the player is connected to a TV via a component video output, you can switch between interlaced video and progressive scan video simply by pressing the PROGRESSIVE key on the remote.

With an HDMI connection, pressing the HDMI RESOLUTION +/- keys lets you select from 1920 x 1080i, 1280 x 720p, 720 x 480p, and 720 x 480i video resolutions, depending on the pixel count or progressive scan compatibility of the connected monitor. The remote control also has the HDMI COLOR key. Press this key to switch between:

Full Range RGB — For brighter colors and blacker black

RGB — When Full Range RGB gives your monitor overly rich colors

Component — Component video format (default setting for HDMI-compatible devices)

Jog/Joystick Remote Control (DV-79AVi/DV-F07)

The remote control for Elite DVD players features a jog dial and a joystick — the first for scan and other versatile playback, the second for navigating GUI on-screen menus.

On-Screen GUI (Graphical User Interface)

The on-screen display helps you set up the environment properly. Interacting with and assisted by the on-screen display on your TV, you can choose the GUI language, screen aspect ratio, DVD camera angle, parental lock level, and many other functions. Easy-to-follow GUI menus are logically layered to promote ease of use. With the DV-F07, you can control up to 300 discs through GUI. The DV-79AVi, and DV-46AV come with advanced on-screen GUI that further simplifies the complicated DVD settings.

Versatile Playback Functions

Playability of DivX® Files (DV-46AV)

The DV-46AV Elite DVD player allows playback of DivX® files burned on a CD-R/RW/ROM disc. DivX® is a popular media technology including compressed digital video, which ensures a high compression rate and fast transfer speed without appreciably compromising the picture quality. Create a DivX® movie on your PC, burn it to a disc, and play it on the Pioneer DVD players.

What's more, the DV-46AV is an official DivX® Ultra Certified product**. This means the unit lets you enjoy DivX® 6 files with interactive features like DVD Video — including menus, selectable subtitle languages/audio tracks, and so on.

* DivX, DivX Ultra Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

Photo + Music Mix (JPEG Slideshow with Music) (DV-46AV)

The DV-46AV Elite DVD player lets you play back JPEG still photos and MP3/WMA music files from a loaded disc at the same time. This means you can enjoy watching digital still photos enlarged on your TV screen while your favorite tunes play as background music — ideal for parties and more.

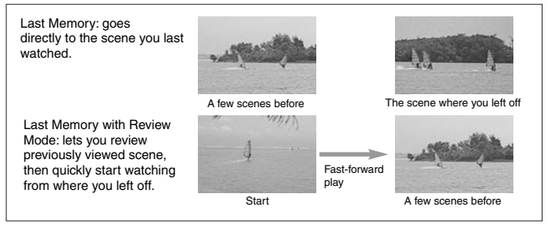
Condition Memory (DVD) (DV-F07)

Load a disc, and the player automatically recalls the set of playback parameters you've selected for it — aspect ratio, soundtrack, subtitle, and OSD position. Once you've memorized the conditions for a disc, the Elite DVD player will identify the disc each time you play it and start playback in the conditions selected. Conditions for up to 100 discs can be memorized. Setup is as simple as pressing the "CONDITION" button when you're through viewing a disc. Memory is managed on the LRU (Least Recently Used) basis: the data (condition) for the disc that is not recalled longest is automatically erased to make room to store the data (condition) of a new disc.

Continue Play Memory (DVD/VCD) (DV-F07)

When you interrupt play of a disc, Continue Play Memory (Last Memory) lets you store in memory the last settings for it — aspect ratio, soundtrack, subtitle, and other parameters — as well as the location where you left off. So, the next time you play the disc, you can resume play from the same point, using the same settings. For additional convenience, the settings in memory are not disturbed even if you have played other DVDs and adjusted settings in the interim; they are kept for instant recall. You can store the last settings for up to five DVDs and one VCD.

* Continue Play Memory will be cleared once a loaded VCD is removed.


Last Memory: goes directly to the scene you last watched.
A few scenes before
The scene where you left off
Last Memory with Review Mode: lets you review previously viewed scene, then quickly start watching from where you left off.
Start
Fast-forward play
A few scenes before

Custom-File 300-DVD/CD Playback (DV-F07)

The DV-F07 is the world's first 300+1 DVD/CD changer. Couple two of them, and you can even control an incredible 601 discs — DVDs, CDs and combinations. In addition, it can play back CD-R and CD-RW discs you make on your own. Ease of use is enhanced with GUI (Graphical User Interface) allowing access and control of up to 300 discs.

• Auto Update

At the touch of a button, all loaded discs are automatically given unique identities (addresses) by type (DVD or CD) and contents (TOC and CD Text). It makes possible a number of conveniences.

• Disc Identification

Each disc — that is, its disc title and the artist's name — is identified not by a slot number in the rack but its contents stored in memory. So even when you move a disc from one slot to another, its title and artist name remain identified.

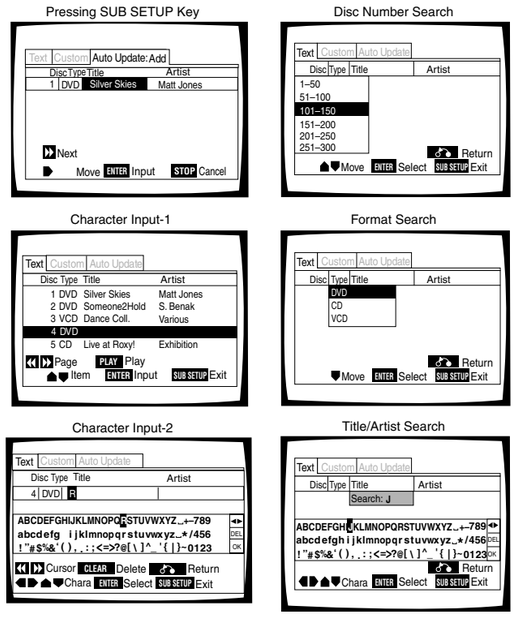
• Title Input by Mouse or PC Keyboard

You can conveniently and efficiently enter disc titles, artist names, and custom file names for "data retrieval" using a PC keyboard or computer mouse*.

*Neither a PC keyboard nor a mouse is included in the package.

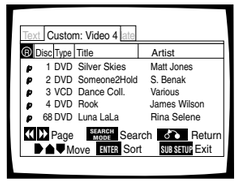
• On-Screen Disc Management System

You can display lists of identified discs and artist names on-screen and select the desired disc using a PC mouse or a joystick. You can sort discs by title or artist name for easy search of a wanted disc.



• Custom Filing

The custom filing gives organization to your DVD/CD library. Refer to page 48 for details. With the DV-F07, you can divide 300 loaded discs into twenty groups or custom files (ten for audio, ten for video), each holding up to 300 discs. You can give a name of up to 12 letters to each of the twenty files for display on the screen and selection from the menu.



• Menu Selection and Track Programming by Mouse

You can control the player using a computer mouse. At a click, a menu with a list of icons for play appears on the screen. Using the setup menu, you can adjust various parameters of the player. Moreover, you can program tracks from DVDs and CDs using the mouse and on-screen menus.

• Control via Keyboard

Using F1-F5 keys and the numeric keypad on a PC keyboard, you can choose modes and efficiently enter text for disc titles and artist names from a keyboard.

• Combining Audio with Video

When you combine two of the DV-F07, you can set one to output an audio signal and the other to output a video signal. This lets you enjoy video against the music or sound effect of your choice, or listen to music against the image of your choice.

• Playback Control from External RS-232C Commander

The built-in RS-232C communications port allows external control of setup and playback functions using RS-232C commands.

Inputs and Outputs

HDMI™ Interface (DV-79AVi*/DV-46AV)

The DV-79AVi and DV-46AV feature HDMI™ (High Definition Multimedia Interface), an uncompressed, all-digital audio/video interface, which is the first industry-supported unit of its kind. Its benefits over conventional terminals include:

• A high bit rate, up to 2.2 Gbps for HDTV, for processing large amounts of uncompressed, high-quality data for both video and audio signals.

• Ensured lossless transmission for high picture and sound quality, as signals remain in a pure digital state, without D/A or A/D conversion.

• Transmission of both video and audio signals through a single cable, and with much smaller plugs than DVI, which handles video signals only.

HDMI is compatible with the pixel counts of all the current ATSC digital television formats, and supports up to eight channels of audio**. In addition, HDMI for the Elite DVD players also supports DVD Audio, for high-spec sound. Pioneer's Elite Plasma Display Panels and new Elite A/V receivers — VSX-84TXSi, VSX-82TXS, VSX-81TXV, and VSX-80TXV — also come with HDMI interfaces.

*Depending on the component you have connected, using a DVI connection may result in unreliable signal transfer.

**The units allow output of Linear PCM (2-channel and 5.1-channel) and compressed audio (Dolby Digital, DTS, and MPEG).

i.LINK (IEEE1394) (DV-79AVi)

Today's sophisticated multi-channel audio recordings deliver a new level of sound quality unlike anything that came before. In order to deliver these digital signals, new methods of transmission were developed. i.LINK connectivity allows you to simplify your system and expand its performance at the same time. It's an advanced digital interface that provides an avenue for the transmission of DVD-Audio and SACD (Super Audio CD) music. In addition, i.LINK streamlines connection between the source player and the receiver. What used to take up to six different connections to achieve, i.LINK handles with one simple digital connection.

i.LINK and i™ are the trademarks of Sony Corporation.

Advantages

• Easy operation
- A single i.LINK cable can deliver multichannel digital audio, as well as control and other types of data.
- Transmission of DVD-Video, SACD, CD, VCD, DVD-RW, and MP3 data is supported.
- Automatic output selection, auto play and input selection in conjunction with the VSX-84TXSi Pioneer Elite A/V receiver.

• High-quality transmission
- PQLS (Precision Quartz Lock System) enables jitter-free transmission.

• Network compatibility
- Supports S400 (400 MB/sec.) transmission speed.
- Two 4-pin connectors.
- Connection with A&M Protocol (Audio & Music Data Transmission Protocol) equipment to enable the transmission of audio data and MIDI data on an IEEE1394 bus.
- DTCP (Digital Transmission Content Protection) encryption to provide for digital connections between components.

Audio/Video Connections

On its rear panel, each Pioneer Elite DVD player is provided with an array of inputs and outputs for digital and analog sources. This means there are many ways to improve, upgrade and expand your home theater system.

Dolby Digital/Linear PCM digital outputs (optical and coaxial) can be connected to the matching inputs on a DTS-compatible amplifier or receiver for DTS (Digital Theater System). You can customize your system's configuration according to your home theater environment.

The component video output provides the highest level of picture quality. It keeps the video output from a DVD in its three separate components — PR, PB and Y. This format, which is standard in professional video, delivers color images with much higher precision and definition than the common composite video output used in consumer video products. Degradation due to interference is kept to a minimum. You enjoy a picture practically free of noise, with improved color fidelity and high color purity.

An analog audio input and a coaxial digital input (DV-F07) allow you to combine the image from a loaded DVD with the sound from an external source like a CD.

Three types of video output terminals — Component, S-Video and Composite — make it possible to connect a Pioneer Elite DVD player direct with a wide variety of projection monitors, and even to supply video signals to five display monitors.

An S-Video input and a composite video input (DV-F07) let you combine the audio from a loaded CD with the image from an external source like a VCR.

	DV-79AVi	DV-46AV	DV-F07
HDMI Output	1	1	
Component Video Output	1*	1*	1*
6-Channel Audio Output	Yes*	Yes*	
Coaxial Digital Output	1*	1*	1*
Optical Digital Output	1	1	1
S-Video Output	2*	1*	1*
Composite Video Output	2*	1*	1*
Audio Output	1*	1*	1*
Coaxial Digital Input			1*
S-Video Input			1*
Video Input*			1*
Audio Input			1*
i.LINK (IEEE 1394)	2		

* Gold Plated

Elaborate Mechanical Construction

Triple Layered Chassis (DV-79AVi)

The Steel Stabilizing Plate improves the stability of the disc driving mechanism, while the Triple Layered Chassis better isolates components from vibration. The Triple Layered Chassis features thicker, larger-sized plates than previous models, creating even more stabilization. The result is better signal readout accuracy, for significant improvement of video and audio quality

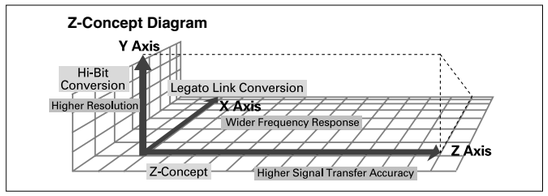
Power-Supply Transformer for the Audio Circuit (DV-79AVi)

The audio circuit for the DV-79AVi comes with a dedicated power-supply transformer. This means that the power supply for the audio circuit is separate from that of the video circuit, so the electric current for the video will not interfere with that for the audio. The result is a stable, noiseless power supply for the audio circuit, which further enhances the superior sound quality.

Z-Concept for Higher Musical Signal Transfer Accuracy

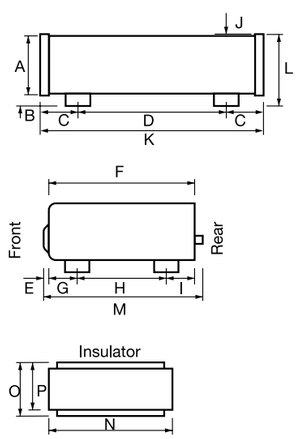
Pioneer developed the Z-Concept as an integral approach to improving the performance of digital conversion in the time domain for higher musical signal transfer accuracy. This approach ensures that data is read out from a disc, signals are transmitted from circuit to circuit, and the digital signals are converted into analog, all with significantly improved accuracy. In other words, the Z-Concept achieves three objectives:

Stable signal detection;
Accurate signal transmission; and
Jitter-free D/A conversion.

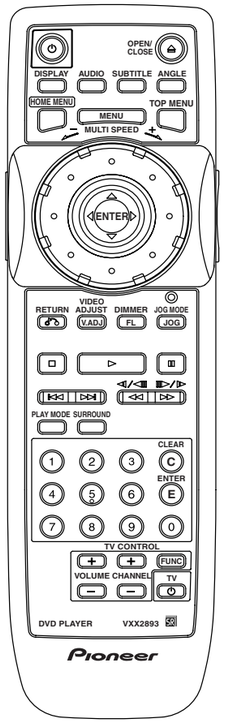


■ DIMENSIONS

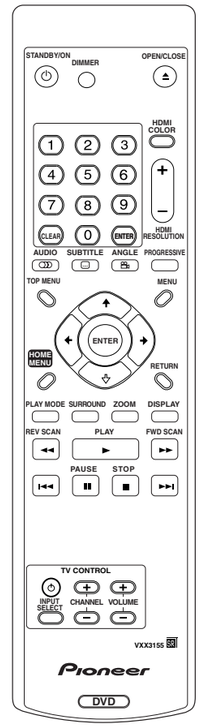
	DV-79AVi		DV-46AV		DV-F07	
A	100 mm	3-15/16"	47 mm	1-7/8"	165 mm	6-1/2"
B	17 mm	11/16"	4.5 mm	3/16"	29 mm	1-1/8"
C	40 mm	1-9/16"	40 mm	1-9/16"	60 mm	2-3/8"
D	340 mm	13-3/8"	340 mm	13-3/8"	340 mm	13-3/8"
E	3 mm	1/8"	1.5 mm	1/16"	4 mm	3/16"
F	330 mm	13"	205.5 mm	8-1/16"	422 mm	16-5/8"
G	60 mm	2-3/8"	61 mm	2-3/8"	58.5 mm	2-5/16"
H	229.5 mm	9-1/16"	104 mm	4-1/8"	272 mm	10-11/16"
I	40.5 mm	1-5/8"	40.5 mm	1-5/8"	91.5 mm	3-5/8"
J	—	—	—	—	1 mm	1/16"
K	420 mm	16-9/16"	420 mm	16-9/16"	460 mm	18-1/8"
L	117 mm	4-5/8"	51.5 mm	2"	194 mm	7-5/8"
M	340 mm	13-3/8"	215.5 mm	8-1/2"	434 mm	17-1/16"
N	ø55 mm	ø2-3/16"	—	—	ø55 mm	ø2-3/16"
O	18 mm	11-16"	—	—	18.5 mm	3/4"
P	16.5 mm	5/8"	—	—	16.5 mm	5/8"



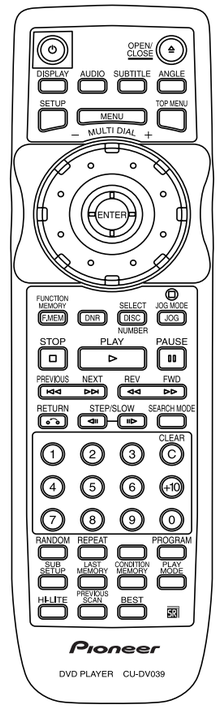
■ REMOTE CONTROLS



DV-79AVi



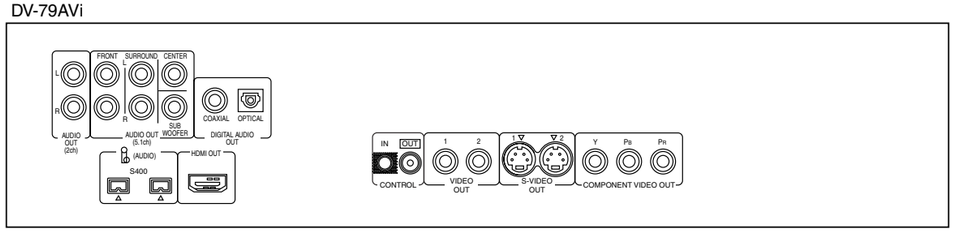
DV-46AV



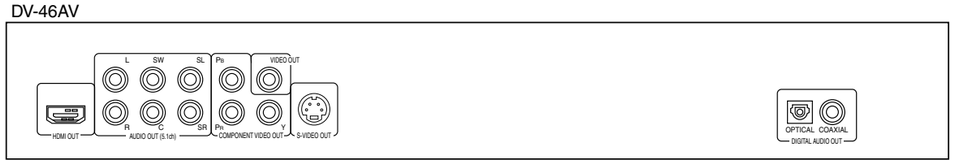
DV-F07

■ REAR PANELS

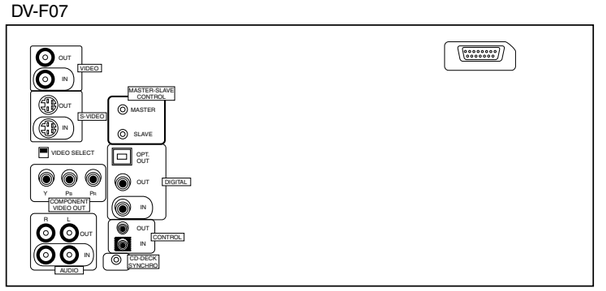
DV-79AVi



DV-46AV



DV-F07



A/V RECEIVERS

Advanced Highlights of Pioneer's 2006/2007 Elite A/V Receivers

1080p Home Theater from Pioneer
- **1080p Home Theater from Pioneer**

Phase Control — An Innovation for Multi-Channel Sound Compensation
- **Phase Control Technologies**

Advanced Multi-Channel Stereophonic Philosophy
- **Advanced MCACC**
- **Standing Wave Control (an MCACC function)**

Home Theater Sound
- **THX Select2 Certified**
- THX Surround EX
- Dolby Digital EX
- DTS 96/24
- DTS-ES
- DTS NEO:6
- Windows Media® Audio 9 Professional
- Dolby Pro Logic IIx
- Dolby Pro Logic II
- Advanced Surround

High-Performance Devices for Superior Sound Quality
- **Sound Retriever**
- **32-bit Digital Processing by "The 3rd-Generation SHARC® Processor" and Freescale 48-bit Processing DSP**
- **Ultra Digital Core Engine 2**
- Advanced Direct Energy Power Amplifier

Innovations in Construction and Materials
- 3-D Space Frame Construction
- Symmetrical Power Train Design

Versatile Video Control
- **Digital Video Converter**
- Pioneer Video Converter
- **Video Up-Scaling with DCDi™ by Faroudja**

User-Friendly Operation
- On-Screen Display

Versatile Input and Output Connections
- **HDMI Terminals**
- i.LINK (IEEE1394)
- USB Interface
- **USB Memory Audio Ready (USB Host Function)**
- **iPod® Control**
- **iPod® Control Docks**
- **XM Radio and XM HD Surround**

Advanced Control
- Multi-Room/Multi-Source Remote Control
- System Remote Plus (SR+)
- 12 Volt Trigger System

*SHARC is a registered trademark of Analog Devices, Inc.

1080p Home Theater from Pioneer

Create a 1080p Home Theater System with Pioneer Elite Components

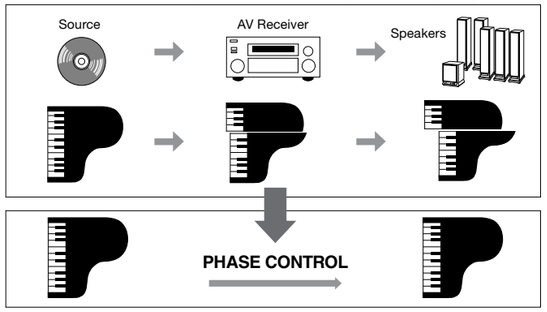
For the first time in the world, a comprehensive range of components for creating a 1080p home theater system is now available — thanks to Pioneer. These components include this year's Elite A/V receivers. You can connect a new Elite A/V receiver — VSX-84TXSi, VSX-82TXS, VSX-81TXV, or VSX-80TXV — to the PRO-FHD1 Elite Plasma Display Panel (PDP) and BDP-HD1 Elite Blu-ray Disc Player via an HDMI terminal (see page 38 for details). The receiver can send 1080p HD video signals from the Blu-ray player to the PDP with precise all-digital signal transmission — and no D/A or A/D conversion. The A/V receivers also deliver superb multi-channel sound from Blu-ray discs.

Phase Control — An Innovation for Multi-Channel Sound Compensation

Pioneer is one of the leaders in technological development and innovation for superior multi-channel sound reproduction. Now we have taken multi-channel sound a step further with patent-pending Phase Control technologies.

The objective of these technologies is to compensate for "phase lag" among channels, or in other words, the delay of some channels with respect to others.

The "Phase Control" Compensates for the Delay of Low-Frequency Sound

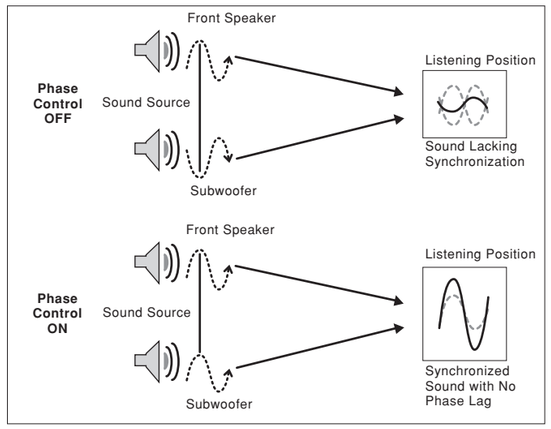


When amplifying multi-channel audio signals, receivers use a Low Pass Filter (LPF) for processing low-frequency signals for subwoofer output. It is this extra process that causes phase lag, an approximately 5 millisecond delay of low-frequency signals with respect to main channels. This is the equivalent of a 6.5 to 9 feet (2 to 3 meter) distance gap. The delayed bass affects the quality of main-channel sound, making the overall sound lack synchronization. Pioneer's Phase Control technologies apply a bass management system that effectively compensates for phase lag, to significantly improve multi-channel sound.

The phase lag problem occurs during software production processes as well — through improper use of the microphone and Low Pass Filter — so Pioneer has also begun offering these technologies to software makers.

Phase Control Technologies

The latest Elite A/V receivers incorporate Phase Control technologies. These receivers come with Phase Control function turned on by default, immediately ready to compensate for the phase lag between subwoofer channel and main channels. Combined with the new Advanced MCACC, this function even further optimizes your multi-channel sound.



Advanced Multi-Channel Stereophonic Philosophy

Collaboration with Professional Sound Studios (VSX-84TXSi/VSX-82TXS)

ADVANCED Multi-Channel Stereophonic Philosophy

Pioneer is dedicated to making your home theater experience as close as possible to what movie makers and studio engineers intended when they created the original sound tracks. Working closely with AIR Studios sound engineers in the UK and George Lucas's SkyWalker Ranch in the U.S., the Pioneer team employed revolutionary processes in order to take your home sound system to the level of a professional sound studio. Professional sound engineers always start with three principles to achieve high fidelity recording and replay: quality reproduction, precision reproduction and artistic reproduction. Pioneer adapted this professional procedure to the design process so that the Pioneer Elite A/V receivers would recreate unprecedented audio fidelity in your home. This includes the best available audio components, measuring and calibrating the system with a microphone, and final sound tuning to preserve the original emotional elation of the music. With the professional master reference sound quality of Pioneer Elite A/V receivers, a concert at home has never been so spectacular.

True Visionaries: Sir George Martin and AIR Studios (VSX-84TXSi/VSX-82TXS)

AIR STUDIOS MONITOR REFERENCE

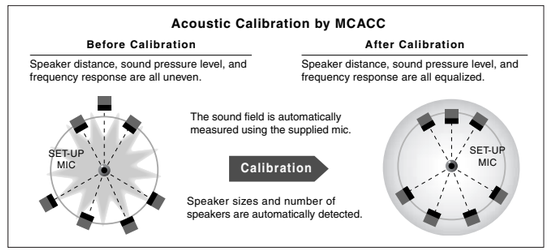
The best sound engineers at one of the best recording studios in the world contributed an unquestionable amount of expertise to these revolutionary multi-channel stereophonic receivers. The founder of AIR Studios is Sir George Martin, legendary Beatles producer and Academy Award-nominated composer — one of music's most versatile and imaginative talents. Established in 1969 in London, AIR Studios is now a state-of-the-art recording complex with matchless facilities for film scoring, rock, pop, classical and orchestral work, postproduction and live events. Many of the world's most popular and renowned musical talents have worked in this unique and inspirational recording environment.

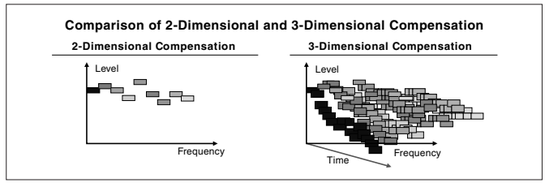
Advanced Multi-Channel Acoustic Calibration System (VSX-84TXSi/VSX-82TXS/VSX-81TXV) Multi-Channel Acoustic Calibration System (VSX-80TXV)

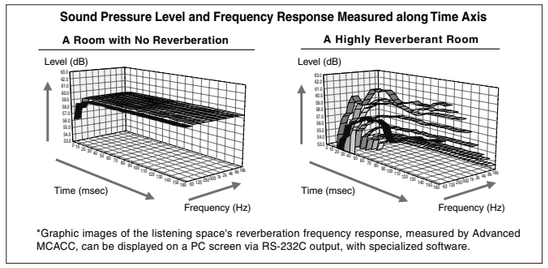
MCACC advanced

The Multi-Channel Acoustic Calibration System (MCACC) is Pioneer's revolutionary answer to the dreams of stay-at-home movie and music fans. The world's first fully automated acoustic calibration system, the MCACC provides a studio-quality, multichannel listening environment by making delicate adjustments to neutralize the sound field of the listening space.

The VSX-84TXSi, VSX-82TXS, and VSX-81TXV moreover, come with an upgraded version of this technological wonder — Advanced MCACC with 3-dimensional compensation. In addition to speaker distance, sound pressure level and frequency response, the Advanced MCACC applies "time axis" in measuring the listening environment's acoustic characteristics and in applying frequency response compensation. This enables the system to distinguish between direct sound and room reverberation, resulting in even more precise, minute adjustment of frequency response for human ears. The Advanced MCACC also features "X-Curve Compensation" of frequency response — a living-room sized version of an international frequency response standard (ISO2969) used for designing movie theaters and dubbing suites.


Acoustic Calibration by MCACC
Before Calibration
Speaker distance, sound pressure level, and frequency response are all uneven.
After Calibration
Speaker distance, sound pressure level, and frequency response are all equalized.
SET-UP MIC
The sound field is automatically measured using the supplied mic.
Calibration
Speaker sizes and number of speakers are automatically detected.
SET-UP MIC





*Graphic images of the listening space's reverberation frequency response, measured by Advanced MCACC, can be displayed on a PC screen via RS-232C output, with specialized software.

With the aid of a microphone, included in the package, the MCACC measures the response from each speaker and performs the following processes:

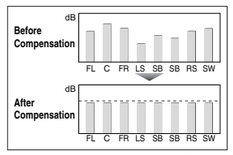
Set-up Mic

(1) Checking the absence (or presence) of connected speakers
The system checks which speakers — front, center, surround, surround back speakers, and/or subwoofer — are connected to the A/V receiver.

(2) Detecting speaker size (large or small)
Bass sound for a small speaker is diverted to a large speaker or subwoofer.

(3) Equalizing the differences of speaker distance from the listening point
Electronically-generated sound delays, as well as those caused by speaker distance gaps, are compensated for.

(4) Neutralizing the differences in sound pressure level
Gaps among channels are limited to ±0.5 dB or less.



Automatic Compensation of Sound Pressure Level

(5) Compensating for timbre differences
The frequency response of each speaker is measured and adjusted for all nine (VSX-84TXSi, VSX-82TXS, and VSX-81TXV) or five bands (VSX-80TXV). This is completed with the original "Envelop Compensation" applied technology, which ensures optimum timbre-matching with minimum phase variations among channels.

(6) Time-axis compensation (VSX-84TXSi/VSX-82TXS/VSX-81TXV)
A revolutionary function integrated into Advanced MCACC. Acoustic treatment can be point-controlled, either manually or automatically — by units of 20 msec between 0msec and 80 msec points. Minute adjustment allows you to create an ideal sound field according to the acoustic characteristics of various listening environments.

* Room reverberation data, measured by Advanced MCACC, can be checked on the PC screen or OSD.

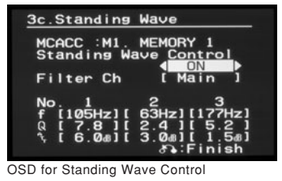
(7) X-Curve Compensation (VSX-84TXSi/VSX-82TXS/VSX-81TXV)
This technology not only calibrates the physical tonal balance, but also corrects for the human brain's interpretation of sound as it is affected by the room size. The result is perfectly flat frequency response.

With all the Elite A/V receivers, you can manually fine-tune the frequency responses of individual speakers according to taste.

MCACC Functions for the Latest Elite A/V Receivers (VSX-84TXSi/VSX-82TXS/VSX-81TXV)

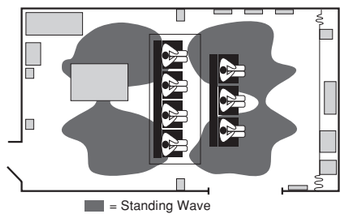
In addition to the functions described above, these receivers also come with the following:

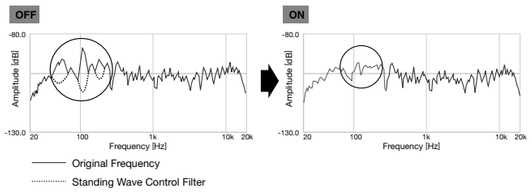
(1) Standing Wave Control
Acoustic standing waves occur when sound waves from your speaker system resonate with those reflected off the walls. This can give a negative effect on the overall sound, especially certain lower frequencies — resulting in an overly resonant, "boomy" sound depending on the speaker positioning, your listening position, and the shape of your room. The new Pioneer Elite A/V receivers' Standing Wave Control effectively moderates the resonance in your listening area. This technology also prevents inappropriate EQ-setting calibration caused by standing waves.



OSD for Standing Wave Control

Standing Wave in a Typical Listening Room





(2) MCACC Memory (Delays, Levels, and Preset EQ)
MCACC Memory allows receivers to memorize up to six preset combinations of delays, levels, and EQ settings. This allows easy switching among combinations, depending on the listening environment.

Home Theater Sound

THX Certified

THX is a Lucasfilm Ltd. program created to achieve maximum accuracy in the reproduction of movie sound. Movie soundtracks are recorded on a large "dubbing stage" using professional equipment. For a soundtrack to be reproduced accurately at home, special technologies are required. That's because your "video room" is much smaller than a movie theater and is acoustically live. What's more, your home theater system uses speakers that are quite different from those found in theaters — and there are only six of them. Finally, when you're at home you sit much closer to the speakers than when you're in a theater. These differences meant you missed the power, thrill, and emotion of a good movie when you watched it at home. Pioneer and Lucasfilm have teamed up to bring the full glory of realistic cinema sound to the comfort and convenience of your home.

Pioneer Elite THX/DTS/Dolby Digital A/V receivers offer:

THX Re-Equalization™: A movie theater is large and acoustically dead, so specialized speakers are used, and typically placed far from viewers. Since a soundtrack is recorded for reproduction in such an environment, it sounds overly brilliant when played at home. THX Re-Equalization compensates for this acoustic difference by achieving smoother high-frequency response.

THX Adaptive Decorrelation™: When surround speakers play back a mono sound, it often seems to come from one side rather than enveloping you from all sides as in a theater. THX Adaptive Decorrelation helps to correct for this inaccuracy by restoring spaciousness on surround signals.

THX Timbre Matching™: Surround sound should envelop the viewer smoothly and seamlessly. Nothing is more distracting than when sounds jump from one speaker to another. By improving the front/surround matching, THX Timbre Matching ensures smooth movement of surround sound.

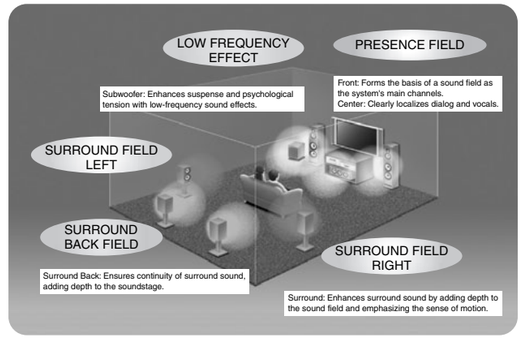
THX Bass Peak Level Management™: Some Dolby Digital soundtracks produce bass peaks that are undesirable in a home theater environment. THX Bass Peak Level Management allows you to control maximum peak levels and properly adjust them to your home theater system.

THX Loudspeaker Position Time Alignment™: This feature lets you equalize differences in the distances between individual loudspeakers and your listening position. Equalizing these distances ensures both precise synchronization of the outputs from all speakers and seamless continuity of the soundfield.

THX Surround EX

THX Surround EX — Dolby Digital Surround EX is a joint development of Dolby Laboratories and the THX division of Lucasfilm Ltd. In a movie theater, film soundtracks encoded with Dolby Digital Surround EX technology are able to reproduce an extra channel — Surround Back — which has been added during the mixing of the program. Because currently available Dolby Digital has 5.1 channels — front left, front center, front right, surround right, surround left and subwoofer channels — Dolby Digital Surround EX offers 7.1 channels.

Encoded on special DVD movie releases, the Surround Back channel places sounds behind the listener. This additional channel allows more detailed imaging behind the listener and brings more depth, spacious ambience and sound localization than ever before. When released on the home consumer market, movies that were created using the Dolby Digital Surround EX technology bear a Dolby Digital Surround EX logo on the packaging. The Pioneer Elite A/V receivers — all with the THX Surround EX logo — can faithfully reproduce this technology in the home in the THX Surround EX mode.


LOW FREQUENCY EFFECT
PRESENCE FIELD
Subwoofer: Enhances suspense and psychological tension with low-frequency sound effects.
Front: Forms the basis of a sound field as the system's main channels.
Center: Clearly localizes dialog and vocals.
SURROUND FIELD LEFT
SURROUND BACK FIELD
SURROUND FIELD RIGHT
Surround Back: Ensures continuity of surround sound, adding depth to the soundstage.
Surround: Enhances surround sound by adding depth to the sound field and emphasizing the sense of motion.

THX Select2

The VSX-84TXSi, VSX-82TXS, VSX-81TXV, and VSX-80TXV all feature THX Select2 certification. This latest THX certification means that a wide array of listening modes are offered to enhance your entertainment. Each mode includes Pioneer-proprietary Advanced Speaker Array (ASA) technology for optimizing playback of multi-channel sound.

THX Cinema: This mode plays 5.1-channel movies using all eight speakers. ASA technology processes audio signals sent to the surround and surround back speakers in a way that optimally blends the ambient and directional sound.

THX MusicMode: This mode is especially suited for multi-channel music. ASA technology is applied to the surround channels of 5.1-channel encoded music sources, creating a wider yet stable acoustic ambience.

THX Games Mode: A full 360-degree, 3-dimensional acoustic ambience is created from stereo or multi-channel game audio, including analog sources and those in PCM, DTS, and Dolby Digital formats. In addition to placing sound accurately, this mode allows smooth point-to-point transition of audio, to further enhance its realism.

*The THX logo is a trademark of THX Ltd., which may be registered in some jurisdictions. All rights reserved.

Dolby Digital EX

The Pioneer Elite A/V receivers come with the Dolby Digital EX decoder. This technology features its capability of decoding the latest theater sound sources for a 6.1-channel output — 5.1-channel plus a back surround channel. The additional surround sound from behind the listener gives the extra sense of dimensional detail and intensified involvement.

DTS 96/24

DTS 96/24 is the first compressed surround format technology to support high sound resolution of 96 kHz and 24 bits and multichannel capabilities, which was applied for a Pioneer Elite A/V receiver, the VSX-49TXi, for the first time in the world.

Advantages

- DTS 96/24 can deliver 5.1 channels in 96/24 along with full-motion video, for feature film soundtracks and music programs on DVD-Video whereas 96/24 has been available on DVD-Video in only two channels, and with video limitations.
- DTS 96/24 can also be used on DVD-Audio discs where a DTS 96/24 track can be placed in the video zone, so that people without DVD-Audio players can enjoy multichannel 96/24 quality using their DVD-Video players.
- The DTS 96/24 soundtrack is fully backward-compatible with all existing DTS decoders, which will deliver up to 48 kHz/24 bits.

Main Features

(1) Reproduces high-quality sound, exactly as recorded on 96 kHz, 24-bit master tapes at the most advanced recording studios.

(2) Full backward compatibility with A/V amplifiers and DVD-Video players equipped with conventional DTS decoders, allowing playback of existing DTS recordings on these devices with the same high sound quality.

(3) High-quality DTS 96/24 sound reproduction using an existing DVD-Video player (with DTS digital outputs) connected via digital cable to a DTS 96/24 A/V receiver.

(4) The DTS 96/24 format enables high-quality multi-channel sound reproduction at 96 kHz and 24 bits through 5.1 channels, without any degradation in the high picture quality of the DVD-Video format, thanks to its low compression rate of audio signals. DVD-Video movies or music can be enjoyed with a quality of sound approaching that of DVD-Audio and SACD.

DTS-ES

DTS-ES utilizes an additional rear channel to create a true 3-dimensional surround field. In a cinema, this surround back channel was created by matrixing the left back and right back channels, just as early surround formats used by a matrix field to create front center channel sound.

When a film soundtrack is transferred to DVD, a matrixed back channel automatically appears in the 5.1-channel format. DTS-ES Discrete 6.1 takes advantages of the greater bandwidth of DTS technology to create a discrete center back channel. This channel is captured with a new generation of decoders like the one built into Pioneer Elite receivers. The advantages of this system are clear:

- Discrete back channels can be played, restoring the left surround and right surround as independent.
- A back channel is always matrixed in the left surround and right surround on 5.1 soundtracks.
- It's fully compatible with any DTS-ES or 5.1-channel recordings.

DTS NEO:6

The conventional matrix decoder derives a center channel and a mono surround channel from a matrix-encoded two-channel source. It delivers better sound than a simple matrix, because it includes steering logic to improve separation, but the monaural, band-limited surround can be disappointing to users accustomed to discrete multi-channel surround sound. DTS NEO:6 provides significant improvement over the conventional technology. It conducts matrix decoding to provide up to six full-band channels from matrix-encoded stereo sources. With 6.1-channel or 5.1-channel systems, DTS NEO:6 will derive six or five separate channels, respectively, corresponding to the standard home-theater speaker layouts. (The 0.1ch subwoofer channel is generated by bass management in the pre amp or receiver).

DTS NEO:6 can steer a single channel or separately steer channels in various ways, to deliver multi-channel sound without losing the quality of the original. In addition to "Cinema mode" suited for movie sources, DTS NEO:6 offers "Music mode", which delivers natural multi-channel surround sound from non-matrix-encoded stereo sources.

Windows Media® Audio 9 Professional (WMA9 Pro)

The Pioneer Elite A/V receivers incorporate a WMA9 Pro decoder, the first surround sound coding technology for the Web — developed by Pioneer with technical cooperation from Microsoft. When connected to a multi-channel-equipped PC, you are able to enjoy high-resolution stereo (96 kHz/24-bit) or 5.1-channel surround audio at 128 k-768 kbps compression rates. At any given bit rate, 5-channel WMA9 Pro will bring you higher fidelity than other sound compression algorithms thanks to the latest audio codec technology.

*Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

Dolby Pro Logic IIx

The Elite A/V receivers come with Dolby Pro Logic IIx. This technology is the first to provide 7.1-channel surround sound from stereo or 5.1-channel sources, for the most natural and seamless surround sound experience. The units process Dolby Pro Logic IIx at 96 kHz sampling rate with 24-bit resolution.

Dolby Pro Logic II

Dolby Pro Logic II is an advanced version of the original. Pro Logic matrix decodes the Dolby Surround signal and creates Front Right, Front Center, Front Left, and monaural Surround, but the Surround channel is limited in separation and frequency response.

Pro Logic II, created by Dolby Laboratories, is a modified version to improve Dolby Surround and allow it to deliver a performance as realistic as Dolby Digital 5.1 offers. It competes with Circle Surround, DTS NEO:6, Pioneer's 5-D Theater/Expanded Theater, etc., that, the manufacturers claim, can decode Dolby Surround just like Dolby Digital 5.1. Pro Logic II has three modes: Movie, Music and Pro Logic.

Pro Logic II Movie: A mode suitable for movies. It features a process to reduce crosstalk from the dialog to surround channels, providing nearly the same degree of separation and sense of movement as Dolby Digital 5.1.

Pro Logic II Music: A mode for music reproduction. This mode is especially effective when playing back conventional stereo sources on CDs and other media. Surround channels enhance the sense of a surrounding ambience, rather than definition and localization.

Advanced Surround Effects

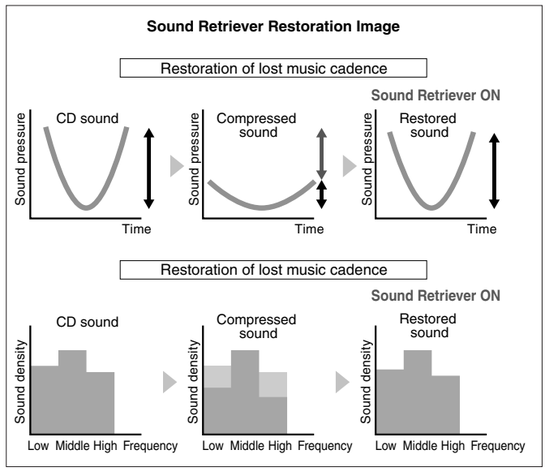
Pioneer's exclusive DSP technology lets you have an expansive and realistic experience of movies and music with a wide variety of customized surround modes. These modes are created for practical applications.

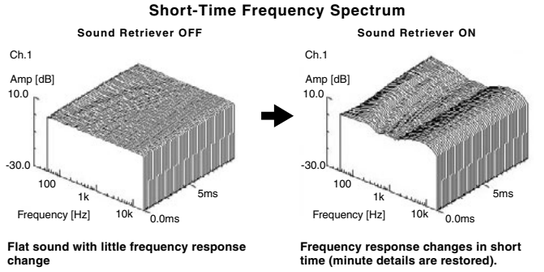
	VSX-84TXSi	VSX-82TXS	VSX-81TXV	VSX-80TXV
Movies and Other Audio-Visual Sources				
ADVANCED MOVIE: Optimized for enjoying movies at home. The realistic enveloping sound this mode delivers makes you feel as if you were in a movie theater.				●
SCI-FI: Designed for science fiction movies, creates a broad sound space and heightens the overall impact of the soundtrack.	●	●	●	
DRAMA: Dialog plays a crucial role in drama movies. This mode enhances conversations and monologues.	●	●	●	
ACTION: Optimized for movies in which sound effects play an important role. Surround channels provide an enveloping sound extending upward.	●	●	●	
MUSICAL: Recreates reflections you would hear in an ideal spherical sound space, letting you enjoy music as if you were in the best theater.	●	●	●	
MONOFILM: Converts mono or stereo into multichannel surround. It works effectively with old movies and sporting events.	●	●	●	● (TV Surround)
7-D THEATER: Plays Dolby Surround sources as dynamically as 7.1-channel Digital Surround does.	●	●	●	
EXPANDED: Stereo sources — CDs, videotapes, records — sound as expansive as 7.1- or 5.1-channel sources.				●
SPORTS: Designed for sports programs with a lot of action. Adds to the excitement by bringing background action to the forefront.				●
ADVANCED GAME: Useful when playing video games. Works especially well with sound moving from left to right in game software with a lot of movement.				●
PhonesSurround: Delivers the effect of overall surround through headphones.	●	●	●	●
ADVANCED VIRTUAL SURROUND: A virtual surround effect using just the subwoofer and front speakers.	●	●	●	
VIRTUAL SURROUND: A virtual surround effect using just the subwoofer and front speakers.				●
Music Sources				
ADVANCED MUSIC: Intensifies the feel of being in a concert hall while you enjoy music on CDs, tapes and other media.				●
CLASSICAL: Simulates the sound field of a large concert hall where concerts by full orchestras take place.	●	●	●	
CHAMBER: Simulates the sonority of a medium-sized concert hall built from stone or concrete.	●	●	●	
JAZZ: Optimized for simulating the sound space of a jazz club with rich reverberations, to make you feel you're sitting in front of musicians.	●	●	●	
ROCK: Simulates the sound field of a medium-sized concert hall. Bass sounds dynamic and the sense of ambience is enhanced.	●	●	●	
DANCE: Simulates the reverberation-rich ambience of a dance club with square floor space, letting you enjoy the excitement of a dance floor.	●	●	●	
7ch STEREO: This "Party Mode" mixes multi-channel sounds down to stereo for playback on seven speakers. You can enjoy music in full stereo even if you are sitting close to the surround speakers.	●	●	●	●

High-Performance Devices for Superior Sound Quality

Sound Retriever

Every Pioneer Elite A/V receiver comes with the newly-developed Sound Retriever, which significantly improves the sound of compressed audio — such as WMA, MP3, and AAC — to the level of CD sound. Sound Retriever creates new signals to restore the minute details left out during the compression process. This technology also enhances the audio quality of XM Radio.





Flat sound with little frequency response change

Frequency response changes in short time (minute details are restored).

32-bit Digital Processing by "The 3rd-Generation SHARC® Processor" from Analog Devices, Inc. and 48-bit processing DSP from Freescale, Inc. (VSX-84TXSi/VSX-82TXS/VSX-81TXV)

The VSX-84TXSi, VSX-82TXS, and VSX-81TXV incorporate "The 3rd Generation SHARC® Processor" from Analog Devices, Inc., which is highly integrated to be used for audio equipment. The latest device boasts significantly improved performance over the previous "SHARC Melody® Ultra", a high-performance 32-bit DSP boasting dual processing capability. The 3rd-generation DSP delivers twice the performance and half the power consumption of the previous device.

The units also feature the latest Freescale DSP with about double the precision of conventional DSPs, which permits 48-bit processing.

The combination of the high-performance DSPs has enabled true 32-bit processing, permitting optimum sound quality, compatibility with all the latest surround formats, and the highest possible decoding capability.

*"SHARC" and "SHARC Melody" are registered trademarks of Analog Devices Inc.

Ultra Digital Core Engine 2 (VSX-84TXSi/VSX-82TXS/VSX-81TXV)

The VSX-84TXSi, VSX-82TXS, and VSX-81TXV benefit from powerful, state-of-the-art Freescale and Analog Devices processors. Both devices are used for pro audio gear for their exceptional performance.

The new Elite A/V receivers come with 32-bit floating point 3rd-Generation SHARC® processor and Freescale 48-bit-processing processor.

With optimum processing power and decoding technology enabled by the Pioneer-exclusive "Ultra Digital Core Engine 2" design, the VSX-84TXSi, VSX-82TXS, and VSX-81TXV provide 96 kHz/24-bit superior-quality processing for the THX Select2 specification, DTS 96/24, DTS NEO:6, and Dolby Pro Logic IIx decoding, and multi-channel sound compensation (including Phase Control and Standing Wave Control).

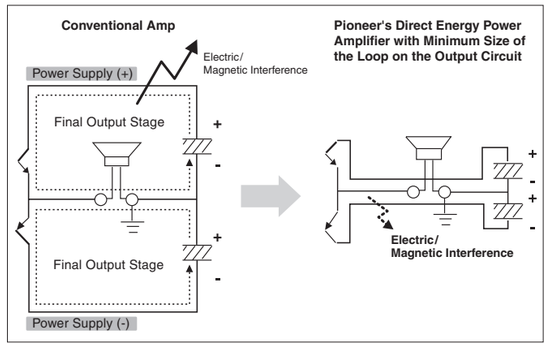
Advanced Direct Energy Power Amplifier — Designed by Pioneer for Optimum Sound Quality

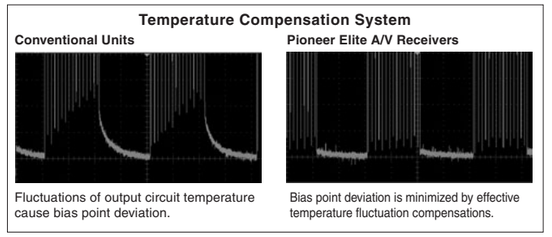
Power amplification in all seven channels is performed by originally-designed Advanced Direct Energy Power Amplifier, featuring minimum energy loss and minimum interference between circuits. These features combine to deliver high-quality sound that is close to the original.

The device features "low-impedance, high-current" design, which minimizes the impedance at the final output stage. This effectively reduces the loss of the signals.

The advanced amplifier also reduces the electric/magnetic interference from the final output stage which significantly affects the sound quality. This is made possible by the compact design of the circuit — with the minimum size of the loop — for the final output stage.

What's more, the device features a new temperature compensation function for bias circuitry. Temperature of the output circuit is subject to change due to the speaker-driving current. The temperature fluctuations cause bias point deviation, which lowers the sound quality. The power amplifier for the new Elite A/V receivers effectively compensates for the fluctuations to minimize the bias point deviation.


Conventional Amp
Pioneer's Direct Energy Power Amplifier with Minimum Size of the Loop on the Output Circuit
Electric/ Magnetic Interference
Power Supply (+)
Final Output Stage
Final Output Stage
Power Supply (-)
Electric/ Magnetic Interference

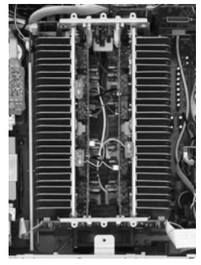

Temperature Compensation System
Conventional Units
Pioneer Elite A/V Receivers
Fluctuations of output circuit temperature cause bias point deviation.
Bias point deviation is minimized by effective temperature fluctuation compensations.

Innovations in Construction and Materials

3-D Space Frame Construction (VSX-84TXSi/VSX-82TXS)

The 3-D Space Frame Construction is developed to clearly define the mechanical grounding of the chassis and make the structure rigid enough to support heavy weight. Perfected by repeated CAE strength analyses and auditions, this technology allows each part to deliver its maximum performance. Interference is also reduced by separating and insulating the power supply, amp, analog circuit, digital circuit, and video sections from one another.

Symmetrical Power Train Design

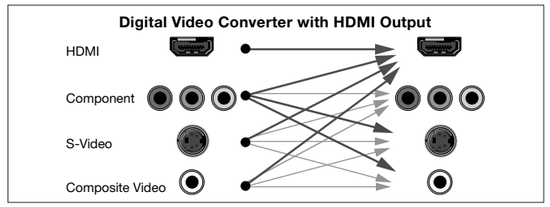


The Pioneer Elite A/V receivers each features power amps for seven channels. Accurate multi-channel sound reproduction is possible only when the operating environment of one channel is physically identical to that of the others. Therefore, with the new Pioneer Elite receivers, power output devices for the left channels (front, surround and surround back) are mounted on the heat sinks symmetrically with respect to those for the right channels.

Versatile Video Control

Digital Video Converter (VSX-84TXSi/VSX-82TXS)

The Pioneer Elite A/V receivers come with HDMI terminals and allow conversion of input video signals for output via HDMI terminal — whether they are input via Composite, S-Video, or Component terminals — in order to display them on a compatible monitor or PDP. Conversions to other signals is also available — from composite to S-Video or Component, for example.



*Availability of Component-to-S-Video/Composite conversion varies depending on the content.

Pioneer Video Converter (VSX-81TXV/VSX-80TXV)

Pioneer Video Converter features highly flexible conversion of video signals. It's capable of converting S-video and composite signals into component video signals, so they appear at the separate component video terminals. Pioneer's wide-band converter is even compatible with the 720p (progressive scan) format (through Component terminals). The Pioneer Elite A/V receiver comes with a number of monitor outputs that supply video signals to VCRs, monitors and other video equipment at the same time.

*The Pioneer Video Converter doesn't change the original picture resolution.

Video Up-Scaling with DCDi™ by Faroudja (VSX-84TXSi/VSX-82TXS)

In addition to digital video converter, the VSX-84TXSi and VSX-82TXS can raise the original picture resolution to 480p, 720p, or 1080i. This lets you coordinate with the pixel count of the connected monitor.

Up-scaling from 480i (interlace) to 480p/720p (progressive) involves interpolation of additional fields. With conventional technology, this interpolation often creates jagged edges along diagonal lines, especially during fast-paced action like football or hockey. The new Pioneer Elite A/V receivers overcome this problem by using DCDi™ (Directional Correlation De-interlacing) technology. DCDi's special algorithm fills in the information gaps that cause jaggedness, to make edges smoother and more natural.

User-Friendly Operation

On-Screen Display

The Pioneer Elite A/V receivers feature simple, well-organized on-screen menus for the best home theater sound and customized A/V control via all video terminals, including component video. Using a handheld remote to interact with menus on your TV screen, you can assign the digital inputs, set the crossover point, adjust the time alignment, and do lots more, simply and easily. The on-screen instructions even help you recall preprogrammed codes for your remote control*.

*Available with 480i output via HDMI only. Please note some devices don't permit 480i output via HDMI.

Versatile Input and Output Connections

HDMI Terminals

All of the new Elite A/V receivers come with an HDMI (High Definition Multimedia Interface) terminal. In addition to allowing 1080p signals to be relayed from a Blu-ray player to compatible PDP, HDMI provides the following benefits:

- A high bit rate, up to 4.45 Gbps for HDTV, for processing large amounts of uncompressed, high-quality data for both video (including 1080p) and audio signals.
- Ensures lossless transmission for high picture and sound quality, as signals remain in a pure digital state, without D/A or A/D conversion.
- Compatibility with the pixel counts of all the current ATSC digital television formats (The VSX-84TXSi, VSX-82TXS, and VSX-81TXV support HDMI Version 1.2).
- Transmission with much smaller plugs than DVI, which handles video signals only.
- Supports up to eight channels of audio.

The units even permit analog-to-digital conversion of video signals for output via HDMI terminal (see "Digital Video Converter" on page 37 for details).

Number of HDMI Terminals

Models	In	Out
VSX-84TXSi	4	1
VSX-82TXS	3	1
VSX-81TXV	2	1
VSX-80TXV	2	1*

*The VSX-80TXV cannot process or amplify digital audio signals transmitted via HDMI. To deliver audio with the VSX-80TXV, connect it with the source player using separate audio cables (e.g. optical or coaxial cables).

i.LINK (IEEE1394) Advanced Resolution Digital Audio Interface (VSX-84TXSi)

Today, multi-channel sound is critical for enhancing audio of both movies and music. i.LINK connection — a new secured bus standard — allows you to enjoy added convenience coupled with the most technologically advanced method of processing audio through one cable instead of multiple analog cables. Moreover, it helps simplify your system and expand its performance at the same time.

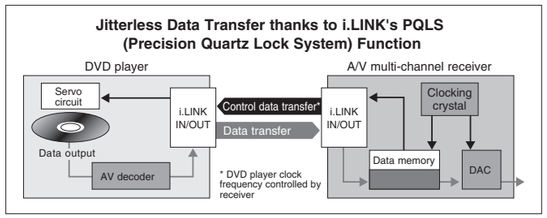
i.LINK is an advanced digital interface that provides an avenue for the transmission of DVD-Audio and SACD music. In addition, i.LINK streamlines connection between the source player and the receiver.

In conjunction with the DV-79AVi, the VSX-84TXSi with i.LINK offers exceptional conveniences, including:

• When you start playback of a DVD on the player, the input is set to DVD on the receiver and the output is configured automatically.

• With DVD-Audio and SACD sources, the MCACC procedure takes place without the necessity of D/A and A/D conversion. This means high sound quality.

• Direct connection with a compatible DVD player allows the receiver's highly stable clock to control the output signals from the player — Pioneer-exclusive PQLS (Precision Quartz Lock System). This ensures jitter-free signal transmission and highly accurate reproduction of minute details.



USB Interface (VSX-84TXSi)

The VSX-84TXSi features a USB input, which lets you treat your PC as a regular music playback source. The audio is transferred in the digital domain, so you get significantly better sound than you usually get from the analog output of PC sound cards.

USB Memory Audio Ready (USB Host Function) (VSX-81TXV/VSX-80TXV)

The above Elite receivers are ready to serve as USB Hosts. They come with a USB input terminal located on the front panel, which allows easy connection with your digital audio player or USB memory, for playing music files via your audio system.

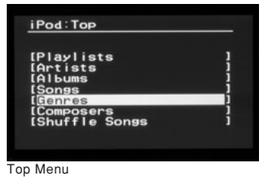
iPod® Control (VSX-84TXSi/VSX-82TXS/VSX-81TXV)

The new Elite A/V receivers come with a dedicated iPod® terminal and an iPod® connection cable. Connect your iPod® to the unit to enjoy music files via your audio systems. You can control the connected player, using the A/V receiver's remote control with menu screen displayed on your monitor — similar to using an iPod® itself. In addition, this connection provides the following benefits:

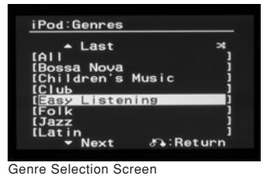
- Analog signals from iPods are up-converted to 192 kHz/ 24-bit resolution.
- A range of audio features of the A/V receivers — including Sound Retriever, MCACC, Phase Control, DSP modes, and more — are applied to sound from iPod®.
- Multi-Room/Multi-Source Remote Control is available.
- You can recharge iPod® batteries via the connected A/V receiver.

In addition to audio, you can also play back your iPod® photos or videos with the VSX-84TXSi and VSX-82TXS. Music videos, movies, TV shows, and photo slide shows look better on a large TV screen, where they can be shared with your family and friends.

OSD for iPod® Control



Top Menu



Genre Selection Screen

iPod® Connection Cable (Included)

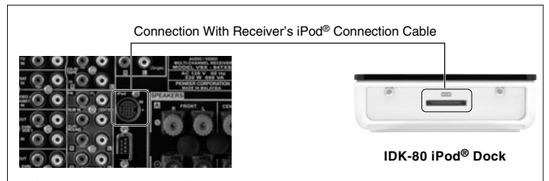
* The units are compatible with iPod®, iPod® mini, iPod® nano, and iPod® Photo, but compatibility may vary depending on the software incorporated in your iPod®. The Pioneer A/V receivers do not support software versions prior to iPod® update 2004-10-20. Consult your nearest Pioneer dealer for supported versions.
** While connected to the A/V receiver, iPod® cannot be controlled directly and only the word "Pioneer" is displayed on the iPod® display. Functions such as equalizer cannot be controlled using the receiver, so we recommend you to turn off the equalizer before connecting.

iPod is for legal or rightholder-authorized copying only. Don't steal music. iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

iPod® Control Docks (Optional)

IDK-80 (VSX-84TXSi/VSX-82TXS/VSX-81TXV)

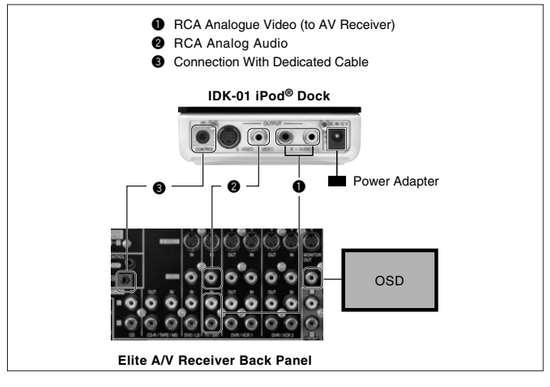
The optional IDK-80 iPod® dock can be connected through the receiver's iPod® connection cable. You can control your iPod® with the receiver's remote control, while your iPod® gets charged on the dock.



Elite A/V Receiver Back Panel

IDK-01 (VSX-80TXV)

You can enjoy your iPod® music on the VSX-80TXV via the IDK-01 iPod® dock. The package includes cables, a remote control, and an AC-adapter. You can play your iPod® using the remote control and the menu screen on your TV. The dock also charges your iPod.



Elite A/V Receiver Back Panel

XM Radio and XM HD Surround

XM is a leading provider of satellite radio service in the United States. Through two high-power satellites, Rock and Roll, XM Radio offers over 150 channels of music, news, talk, sports, and children's programs on a monthly subscription basis — with clear sound enabled by the digital radio signals.

In addition, XM has started delivering "XM HD Surround" in cooperation with Neural Audio Corporation. This is the world's first radio broadcast in 5.1-channel surround sound delivered twenty-four hours a day. XM HD Surround uses Neural Surround™ technology, which allows superb spectral resolution and channel separation. This lets listeners immerse themselves in the rich subtleties and deep ambience of recorded performances.

Programs in XM HD Surround include Fine Tuning® (XM Channel 76), XM Pops (XM Channel 113) for popular classical music, and a variety of special shows and live music performances at the XM studios.

All of the new Elite A/V receivers let you connect with your XM "Connect-and-Play" digital antenna for easy control and high-quality sound — including 5.1-channel surround sound — delivered through your audio system. Information is displayed on the monitor screen or on the receiver's front panel display, allowing the following operations:

- Channel selection — You can search for channels with Channel Guide or narrow down your channel search with Category Guide. You can also enter three-digit channel numbers for direct access to a desired channel.
- Saving song information such as artist name and song title.
- Saving preset channels — the receivers can memorize up to 30 channels, 10 each from three classes (A, B, and C) for easy access.

XM Satellite Radio is a subscription service not affiliated with Pioneer Electronics.
Activation required through XM Satellite Radio.
Neural Surround™ is a trademark owned by Neural Audio Corporation.

Advanced Control

Multi-Room/Multi-Source Remote Control

Wouldn't it be nice if you could enjoy music or movies in a "remote" room away from the "main" room where your audio or audio/video system is? With Pioneer's Multi-Room/Multi-Source Remote Control, you can. You can play two different program sources in two rooms independently at the same time. So now you can watch a program on a VCR in the living room, while the kids are watching their favorite movie on a DVD player in the bedroom.

What's more, the second program source can be selected from the remote room using a remote control unit and an infrared sensor unit (both available from third parties). It's an easy way to multiply your family's entertainment possibilities.

A convenient function is the "sub room" volume control. You can adjust volume level or turn the power of the amplifier installed in the sub room, independent of the main room system's settings. Moreover, you can choose the Sub Room Volume Level setting between "VARIABLE" and "FIXED" for connection of a separate power amplifier, and an integrated amplifier or receiver, respectively. There's an independent MULTI-ROOM & SOURCE button on the front panel to turn on and off the Multi-Room/Source function.

What's more, the VSX-84TXSi and VSX-82TXS additionally permit controlling a digital audio player in "ROOM 3", or the third room.

The VSX-84TXSi comes with a handy sub remote control, which has all the basic functions of the main remote control. The sub remote control is designed for use in sub rooms, letting you take full advantage of this Multi-Room/Multi-Source function.

VSX-84TXSi
Sub Remote Control

System Remote Plus (SR+) Connection

The units feature the System Remote Plus (SR+) terminal. The terminal lets you connect the A/V receiver with Pioneer's compatible PDP (or its media receiver) to allow the two devices to interact. What results is a host of user-friendly benefits:

• Video and audio signals — received by the media receiver and Pioneer A/V receiver, respectively — are kept consistent with each other, switched at the same time and in the same way with a single operation.

• Basic information on your home theater system — including A/V receiver volume, selected surround mode, and MCACC process — is displayed on the TV screen.

• All the connected devices* become remote-controllable through the PDP's sensor window.

*The devices must be connected through SR+ terminals.

12 Volt Trigger System

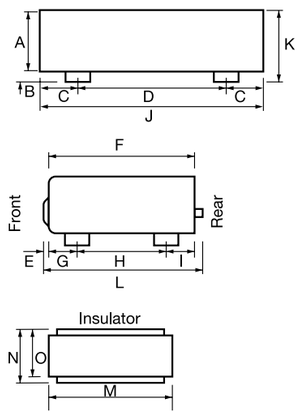
The VSX-84TXSi and VSX-82TXS come with two "12V Trigger" interfaces. You can connect several devices* — a DVD player and an external power amplifier, for example —via the interfaces, and specify what type of unit(s) you want to control at the setup screen. This lets you activate/deactivate the devices in synchronization with the A/V receiver. You can opt to disable the 12 Volt Trigger System even when a device(s) is connected. The VSX-81TXV and VSX-80TXV come with one 12V Trigger interface.

The Elite A/V receivers also have an AC outlet, primarily designed for use with source products. This lets you switch on/off the entire system using the receiver remote control or keys on the front panel.

*12 Volt Trigger System works only with devices that have standby mode.

■ DIMENSIONS

	VSX-84TXSi		VSX-82TXS		VSX-81TXV		VSX-80TXV	
A	170 mm	6-11/16"	170 mm	6-11/16"	155 mm	6-1/8"	155 mm	6-1/8"
B	17 mm	11/16"	17 mm	11/16"	18 mm	11/16"	18 mm	11/16"
C	40 mm	1-9/16"	40 mm	1-9/16"	40 mm	1-9/16"	40 mm	1-9/16"
D	340 mm	13-3/8"	340 mm	13-3/8"	340 mm	13-3/8"	340 mm	13-3/8"
E	21 mm	13/16"	21 mm	13/16"	18 mm	11/16"	18 mm	11/16"
F	420 mm	16-9/16"	420 mm	16-9/16"	390 mm	15-3/8"	390 mm	15-3/8"
G	59 mm	2-5/16"	59 mm	2-5/16"	64 mm	2-1/2"	64 mm	2-1/2"
H	329 mm	12-15/16"	329 mm	12-15/16"	329 mm	12-15/16"	329 mm	12-15/16"
I	32 mm	1-1/4"	32 mm	1-1/4"	32 mm	1-1/4"	32 mm	1-1/4"
J	420 mm	16-9/16"	420 mm	16-9/16"	420 mm	16-9/16"	420 mm	16-9/16"
K	187 mm	7-3/8"	187 mm	7-3/8"	173 mm	6-13/16"	173 mm	6-13/16"
L	462 mm	18-3/16"	462 mm	18-3/16"	466 mm	18-3/8"	466 mm	18-3/8"
M (FRONT)	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"
M (REAR)	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"	Ø55 mm	Ø2-3/16"
N	18 mm	11/16"	18 mm	11/16"	18 mm	11/16"	18 mm	11/16"
O	16.5 mm	5/8"	16.5 mm	5/8"	16.5 mm	5/8"	16.5 mm	5/8"



■ RS-232C Commands List

Automatic Feedback

When the customer changes the status using knobs on the front panel or the remote controller of AV receiver, AV receiver send new status automatically.
(VOLXX,PQRX,MUTX,FUNXX,SRXXXX,LMXXX) (For example) The user changes function on the front panel. We send : FUNXX<CR+LF>

X:Argument:ASCII code

Status Request Command — Command correspondence table

Command	Command Name	Argument	Operation	Answer	VSX-84TXSi	VSX-82TXS	VSX-81TXV
?V<CR>	VOLUME LEVEL STATUS REQUEST		Return the VOLUME LEVEL	VOLXX<CR+LF> *1	●	●	●
?P<CR>	POWER STATUS REQUEST		Return the POWER status	PWRX<CR+LF> *2	●	●	●
?M<CR>	MUTE STATUS REQUEST		Return the MUTE status	MUTX<CR+LF> *2	●	●	●
?F<CR>	FUNCTION MODE REQUEST		Return the FUNCTION MODE	FUNXX<CR+LF> *3	●	●	●
?S<CR>	LISTENING MODE SETTING REQUEST		Return the L.M SETTING	SRXXXX<CR+LF> *4	●	●	●
?L<CR>	LISTENING MODE REQUEST		Return the L.M	LMXXX<CR+LF> *5	●	●	●
?TO<CR>	TONE STATUS REQUEST		Return the TONE status	TOX<CR+LF> *6	●	●	
?BA<CR>	BASS STATUS REQUEST		Return the BASS Level	BAXX<CR+LF> *7	●	●	●
?TR<CR>	TREBLE STATUS REQUEST		Return the TREBLE Level	TRXX<CR+LF> *8	●	●	●
?PR<CR>	TUNER PRESET REQUEST		Return the PRESET number	PRXXX<CR+LF> *9	●	●	●
?FR<CR>	TUNER FREQ REQUEST		Return the FREQ number	FRXXXXX<CR+LF> *10	●	●	●
?AC<CR>	ACOUSTIC CAL REQUEST		Return the ACOUSTIC CAL. status	ACX<CR+LF> *11			
?UI<CR>	USB INPUT CH REQUEST		Return the USB INPUT CH. status	UIX<CR+LF> *12			
?MI<CR>	MULTI INPUT CH REQUEST		Return the MULTI INPUT CH. status	MIX<CR+LF> *13			
?AP<CR>	ZONE 2 POWER STATUS REQUEST		Return the POWER status	APRX<CR+LF> *2	●	●	●
?BP<CR>	ZONE 3 POWER STATUS REQUEST		Return the POWER status	BPRX<CR+LF> *2	●	●	
?ZS<CR>	ZONE 2 FUNCTION STATUS REQUEST		Return the FUNCTION MODE	Z2FXX<CR+LF> *3	●	●	●
?ZT<CR>	ZONE 3 FUNCTION STATUS REQUEST		Return the FUNCTION MODE	Z3FXX<CR+LF> *3	●	●	
?ZV<CR>	ZONE 2 VOLUME STATUS REQUEST		Return the VOLUME LEVEL	ZVXX<CR+LF> *1	●	●	●
?MC<CR>	MCACC POSITION REQUEST		Return the MCACC POSITION status	MCX<CR+LF> *15	●	●	●
?EX<CR>	SBch PROCESSING STATUS REQUEST		Return the SBch PROCESSING status	EXXX<CR+LF> *14	●	●	●
?XM<CR>	XM channel REQUEST	000-255	Return XM channel	XMXXX<CR+LF>	●	●	●
?IS<CR>	PHASE CONTROL STATUS REQUEST		Return PHASE CONTROL STATUS	ISX<CR+LF>	●	●	●

Operation Command

Command	Command Name	Argument	Operation	Answer	VSX-84TXSi	VSX-82TXS	VSX-81TXV
VU<CR>	VOLUME UP		VOLUME UP	VOLXX<CR+LF> *1	●	●	●
VD<CR>	VOLUME DOWN		VOLUME DOWN	VOLXX<CR+LF> *1	●	●	●
XXVL<CR>	VOLUME SET	00-93 *1	Set the VOLUME level	VOLXX<CR+LF> *1	●	●	●
PO<CR>	POWER ON		POWER ON	PWRX<CR+LF> *2	●	●	●
PF<CR>	POWER OFF		POWER OFF	PWRX<CR+LF> *2	●	●	●
MO<CR>	MUTE ON		MUTE ON	MUTX<CR+LF> *2	●	●	●
MF<CR>	MUTE OFF		MUTE OFF	MUTX<CR+LF> *2	●	●	●
XXFN<CR>	FUNCTION MODE SET	*3	Set the FUNCTION MODE	FUNXX<CR+LF> *3	●	●	●
FU<CR>	FUNCTION MODE UP		Change the FUNCTION MODE	FUNXX<CR+LF> *3	●	●	●
XXX(X)SR<CR>	LISTENING MODE SET	*4	Change the LISTENING MODE	SRXXX(X)<CR+LF> *4	●	●	●
TO<CR>	TONE ON/BYPASS		TONE ON or BYPASS	TOX<CR+LF>	●	●	
BI<CR>	BASS INCREMENT		BASS INCREMENT	BAXX<CR+LF> *7	●	●	●*
BD<CR>	BASS DECREMENT		BASS DECREMENT	BAXX<CR+LF> *7	●	●	●*
TI<CR>	TREBLE INCREMENT		TREBLE INCREMENT	TRXX<CR+LF> *8	●	●	●*
TD<CR>	TREBLE DECREMENT		TREBLE DECREMENT	TRXX<CR+LF> *8	●	●	●
TB<CR>	TUNER BAND		change the BAND (AM/FM)	FRXXXXX<CR+LF> *10	●	●	●
XTP<CR>	TUNER PRESET	0-9	change the TUNER PRESET	PRXXX<CR+LF> *9	●	●	●
TC<CR>	TUNER CLASS		change the TUNER CLASS	PRXXX<CR+LF> *9	●	●	●
TPI<CR>	TUNER PRESET INCREMENT		TUNER PRESET INCREMENT	PRXXX<CR+LF> *9	●	●	●
TPD<CR>	TUNER PRESET DECREMENT		TUNER PRESET DECREMENT	PRXXX<CR+LF> *9	●	●	●
TFI<CR>	TUNER FREQ INCREMENT		TUNER FREQ INCREMENT	FRXXXXX<CR+LF> *10	●	●	●
TFD<CR>	TUNER FREQ DECREMENT		TUNER FREQ DECREMENT	FRXXXXX<CR+LF> *10	●	●	●
XAC<CR>	ACOUSTIC CAL	0,1,2,3,4	change the ACOUSTIC CAL.	ACX<CR+LF> *11			
XUI<CR>	USB INPUT CH	0,1,2,3	change the USB INPUT CHANNEL	UIX<CR+LF> *12			
XMI<CR>	MULTI INPUT CH	0,1,2,3	change the MULTI INPUT CHANNEL	MIX<CR+LF> *13			
XXZZ<CR>	ZONE2 FUNCTION MODE SET	*3	Set the FUNCTION MODE	Z2FXX<CR+LF> *3	●	●	●
XXZT<CR>	ZONE3 FUNCTION MODE SET	*3	Set the FUNCTION MODE	Z3FXX<CR+LF> *3	●	●	
ZU<CR>	ZONE2 VOLUME UP		VOLUME UP	ZVXX<CR+LF> *1	●	●	●
ZD<CR>	ZONE2 VOLUME DOWN		VOLUME DOWN	ZVXX<CR+LF> *1	●	●	●
XXZV<CR>	ZONE2 VOLUME SET	00-80	Set the VOLUME level	ZVXX<CR+LF> *1	●	●	●
APO<CR>	ZONE2 POWER ON		ZONE2 POWER ON	APRX<CR+LF> *2	●	●	●
APF<CR>	ZONE2 POWER OFF		ZONE2 POWER OFF	APRX<CR+LF> *2	●	●	●
BPO<CR>	ZONE3 POWER ON		ZONE3 POWER ON	BPRX<CR+LF> *2	●	●	
BPF<CR>	ZONE3 POWER OFF		ZONE3 POWER OFF	BPRX<CR+LF> *2	●	●	
XMC<CR>	MCACC POSITION	0,1,2,3,4,5,6	change the MCACC POSITION	MCX<CR+LF> *15	●	●	●
XXEX<CR>	SBch PROCESSING SET	0,1,2	Change EXTENDED MODE	EXXX<CR+LF> *14	●	●	●
STS<CR>	STATUS DISPLAY		to see OSD display	R	●	●	●
XIS<CR>	PHASE CONTROL	0,1	PHASE CONTROL ON/OFF	ISX<CR+LF> *16	●	●	●

* These commands can be operated only in STEREO MODE on VSX-81TXV.

iPod Operation

Command	Command Name	Argument	Operation	Answer	VSX-84TXSi	VSX-82TXS	VSX-81TXV
00IP	PLAY	–	to see OSD display	R	●	●	●
01IP	PAUSE	–	to see OSD display	R	●	●	●
02IP	STOP	–	to see OSD display	R	●	●	●
03IP	PREVIOUS (|<|<|)	–	to see OSD display	R	●	●	●
04IP	NEXT (|>|>|)	–	to see OSD display	R	●	●	●
05IP	REV (<|<|)	–	to see OSD display	R	●	●	●
06IP	FWD (|>|>)	–	to see OSD display	R	●	●	●
07IP	REPEAT	–	to see OSD display	R	●	●	●
08IP	SHUFFLE	–	to see OSD display	R	●	●	●
09IP	DISPLAY	–	to see OSD display	R	●	●	●
10IP	OSD ON/OFF	–	to see OSD display	R	●	●	
11IP	VOL UP	–	to see OSD display	R	●	●	
12IP	VOL DOWN	–	to see OSD display	R	●	●	
13IP	Cursor UP	–	to see OSD display	R	●	●	●
14IP	Cursor DOWN	–	to see OSD display	R	●	●	●
15IP	Cursor RIGHT	–	to see OSD display	R	●	●	●
16IP	Cursor LEFT	–	to see OSD display	R	●	●	●
17IP	ENTER	–	to see OSD display	R	●	●	●
18IP	RETURN	–	to see OSD display	R	●	●	●
19IP	CATEGORY	–	to see OSD display	R	●	●	●

XM Radio Operation

Command	Command Name	Argument	Operation	Answer	VSX-84TXSi	VSX-82TXS	VSX-81TXV
00XM	STATION 10	–	to see OSD display	XM***<CR+LF>	●	●	●
01XM	1	–	to see OSD display	XM***<CR+LF>	●	●	●
02XM	2	–	to see OSD display	XM***<CR+LF>	●	●	●
03XM	3	–	to see OSD display	XM***<CR+LF>	●	●	●
04XM	4	–	to see OSD display	XM***<CR+LF>	●	●	●
05XM	5	–	to see OSD display	XM***<CR+LF>	●	●	●
06XM	6	–	to see OSD display	XM***<CR+LF>	●	●	●
07XM	7	–	to see OSD display	XM***<CR+LF>	●	●	●
08XM	8	–	to see OSD display	XM***<CR+LF>	●	●	●
09XM	9	–	to see OSD display	XM***<CR+LF>	●	●	●
10XM	CH + / Cursor DOWN↓	–	to see OSD display	XM***<CR+LF>	●	●	●
11XM	CH - / Cursor UP↑	–	to see OSD display	XM***<CR+LF>	●	●	●
12XM	PRESET ST + (→)	–	to see OSD display	XM***<CR+LF>	●	●	●
13XM	PRESET ST - (←)	–	to see OSD display	XM***<CR+LF>	●	●	●
14XM	DISPLAY	–	to see OSD display	XM***<CR+LF>	●	●	●
15XM	PRESET	–	to see OSD display	XM***<CR+LF>	●	●	●
16XM	CLASS	–	to see OSD display	XM***<CR+LF>	●	●	●
17XM	DIRECT ACCESS(CH)	–	to see OSD display	XM***<CR+LF>	●	●	●
18XM	MEMORY (EDIT)	–	to see OSD display	XM***<CR+LF>	●	●	●
19XM	MENU	–	to see OSD display	XM***<CR+LF>	●	●	
20XM	CLEAR	–	to see OSD display	XM***<CR+LF>	●	●	
21XM	ENTER	–	to see OSD display	XM***<CR+LF>	●	●	●
22XM	RETURN	–	to see OSD display	XM***<CR+LF>	●	●	●
23XM	CATEGORY	–	to see OSD display	XM***<CR+LF>	●	●	●

(↑ when change channel)

Error Message

Error Message	Error Name	Meaning	VSX-84TXSi	VSX-82TXS	VSX-81TXV
E04<CR+LF>	COMMAND ERROR	Detect Inappropriate Command line	●	●	●
E06<CR+LF>	ARGUMENT ERROR	Inappropriate Factor	●	●	●

■ Explanation of argument

***1 VOLUME LEVEL [2byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
93	+12dB	●	●	●
81	0dB	●	●	●
01	-80dB	●	●	●
00	-- (same as mute)	●	●	●

Example1

Command ?V<CR> Request Volume Level.
Answer VOL93<CR+LF> Volume is set to +12dB.

***2 ON/OFF [1byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
0	ON	●	●	●
1	OFF	●	●	●

Example2

Command ?M<CR> Request Mute Status.
Answer MUT0<CR+LF> Mute On.

***3 Function Mode No. [2byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
00	PHONO	●	●	
01	CD	●	●	●
02	TUNER	●	●	●
03	CDR	●	●	●
04	DVD	●	●	●
05	TV	●	●	●
06	SAT	●	●	
07	VCR1			
08	VCR2			
09	VCR3			
10	VIDEO or VIDEO1	●	●	●
11	i.LINK UNASSIGNED DEVICE	●	●	
12	Multi CH	●	●	
13	USB (B type)	●		
14	VIDEO2	●	●	
15	DVR or DVR1	●	●	●
16	DVR2	●	●	●
17	iPod	●	●	●
18	XM	●	●	●
19	HDMI1	●	●	●
20	HDMI2	●	●	●
21	HDMI3	●	●	
22	HDMI4	●		
30	USB (A type)			

Example3

Command 04FN<CR> Change to source 04(DVD).
Answer FUN04<CR+LF>

Example4

Command in respect of "?F<CR>" Request Current Source.
Answer FUN04<CR+LF> Source 04 is selected(DVD).

***6 TONE STATUS [1byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
0	BYPASS	●	●	
1	ON	●	●	

Example1

Command ?TO<CR> Request TONE Status.
Answer TO1<CR+LF> Tone On.

***7 BASS status [2byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
00	+6	●	●	●
01	+5	●	●	
02	+4	●	●	●
03	+3	●	●	
04	+2	●	●	●
05	+1	●	●	
06	0	●	●	●
07	-1	●	●	
08	-2	●	●	●
09	-3	●	●	
10	-4	●	●	●
11	-5	●	●	
12	-6	●	●	●

Example2

Command ?BA<CR> Request BASS Level.
Answer BA02<CR+LF> BASS is set to +4dB.

***8 TREBLE status [2byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
00	+6	●	●	●
01	+5	●	●	
02	+4	●	●	●
03	+3	●	●	
04	+2	●	●	●
05	+1	●	●	
06	0	●	●	●
07	-1	●	●	
08	-2	●	●	●
09	-3	●	●	
10	-4	●	●	●
11	-5	●	●	
12	-6	●	●	●

Example3

Command ?TR<CR> Request TREBLE Level.
Answer TR02<CR+LF> TREBLE is set to +4dB.

***9 PRESET number [3byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
*00	10	●	●	●
*01	1	●	●	●
*02	2	●	●	●
*03	3	●	●	●
*04	4	●	●	●
*05	5	●	●	●
*06	6	●	●	●
*07	7	●	●	●
*08	8	●	●	●
*09	9	●	●	●

Example4

Command ?PR<CR> Request PRESET number
Answer PRA04<CR+LF> PRESET number is set to class A 4
PRC00<CR+LF> PRESET number is set to class C 10

* = A : class A
* = B : class B
* = C : class C

***10 FREQ number [7byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
A0****		●	●	●
F*****		●	●	●

A is AM / F is FM / * is ASCII code 0 - 9

Example5

Command?FR<CR> Request FREQ number
Answer FRA00890<CR+LF> FREQ number is set to AM 890 kHz
FRF08010<CR+LF> FREQ number is set to FM 80.10 MHz

***14 SBch PROCESSING [1byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
0	OFF	●	●	●
1	ON	●	●	●
2	AUTO	●	●	●

***15 MCACC POSITION [1byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
0	MCACC OFF	●	●	●
1	MEMORY 1	●	●	●
2	MEMORY 2	●	●	●
3	MEMORY 3	●	●	●
4	MEMORY 4	●	●	●
5	MEMORY 5	●	●	●
6	MEMORY 6	●	●	●

***16 PHASE CONTROL [1byte]**

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
0	OFF	●	●	●
1	ON	●	●	●

***4 LISTENING MODE SET,LISTENING MODE SETTING REQUEST [4byte]**

When you set the "Listening Mode" with the product front panel keys and knobs, you operate "LISTENING MODE SELECTOR" knob with "LISTENING CH SELECT" button. There are some modes which are not available depending on the source signal — there is automatic detection for 2ch ch and 6.1ch, not always available though.

With the "SR" command, you can select whichever mode you wish. Also, you can confirm your selection with the "SR" command by "?S" command.

*)When LISTENING MODE is changed, the set will dispatch ANSWER command to let the outside controller the current set status automatically without receiving LISTENING MODE SETTING REQUEST command from the outside controller. (Automatic Feedback)

[2-4byte]:data for mode setting. Indicating below the combination of the modes selected by "LISTENING MODE SELECTOR" and the Listening CH by "LISTENING CH SELECT" in 3bytes.

NEW version (from '05 model) [3byte]

[1-3byte]:data for mode setting.

Indicating below the combination of the modes selected by LISTENING MODE

Example

Command 001SR<CR> set STEREO mode.
Answer SR001<CR+LF> now become STEREO mode.
Answer LM130<CR+LF> now 96kHz STEREO play.
Command ?S<CR> now LISTENING mode?
Answer SR031<CR+LF> now ACTION mode.

			VSX-84TXSi	VSX-82TXS	VSX-81TXV
001	STEREO		●	●	●
002	DIRECT				
010	STANDARD SELECTION (same as key)		●	●	●
012	PRO LOGIC	for 2ch Source	●	●	●
013	PRO LOGICII MOVIE	for 2ch Source	●	●	●
014	PRO LOGICII MUSIC	for 2ch Source	●	●	●
015	PRO LOGICII GAME	for 2ch Source	●	●	●
016	Neo:6 CINEMA	for 2ch Source	●	●	●
017	Neo:6 MUSIC	for 2ch Source	●	●	●
018	PRO LOGICIIx MOVIE	for 2ch Source	●	●	●
019	PRO LOGICIIx MUSIC	for 2ch Source	●	●	●
020	PRO LOGICIIx GAME	for 2ch Source	●	●	●
021	Depending on Source (for Multi-ch)	for Multi-ch Source	●	●	●
022	(Multi-Channel Source) + EX	for Multi-ch Source	●	●	●
023	(Multi-Channel Source) + PRO LOGICIIx MOVIE	for Multi-ch Source	●	●	●
024	(Multi-Channel Source) + PRO LOGICIIx MUSIC	for Multi-ch Source	●	●	●
025	DTS + Neo:6	for Multi-ch Source	●	●	●
026	DTS-ES matrix6.1	for Multi-ch Source	●	●	●
027	DTS-ES discrete6.1	for Multi-ch Source	●	●	●
100	ADVANCED SURROUND SELECTION (same as key)		●	●	●
101	ACTION		●	●	●
102	SCI-FI		●	●	●
103	DRAMA		●	●	●
104	MUSICAL		●	●	●
105	MONO FILM		●	●	●
106	7-D THEATER		●	●	●
107	CLASSICAL		●	●	●
108	CHAMBER		●	●	●
109	JAZZ		●	●	●
110	ROCK		●	●	●
111	DANCE		●	●	●
112	7CH STEREO		●	●	●
113	PHONES SURROUND		●	●	●
114	ADV.MOVIE				
115	ADV.MUSIC				
116	TV SURROUND				
117	SPORTS				
118	ADV.GAME				
119	EXPANDED				
120	EXTRA POWER MODE1				
121	EXTRA POWER MODE2				
122	VIRTUAL SURROUND				
123	FRONT SURROUND MUSIC				
124	FRONT SURROUND MOVIE				
125	ADVANCED VIRTUAL SURROUND		●	●	●
050	THX SELECTION (same as key)		●	●	●
051	PRO LOGIC + THX	for 2ch Source	●	●	●
052	PRO LOGICII MOVIE + THX	for 2ch Source	●	●	●
053	Neo:6 CINEMA + THX	for 2ch Source	●	●	●
054	PRO LOGICIIx MOVIE + THX	for 2ch Source	●	●	●
055	THX GAMES MODE	for 2ch Source	●	●	●
056	THX Depending on Source (for Multi-ch)	for Multi-ch Source	●	●	●
057	THX SURROUND EX	for Multi-ch Source	●	●	●
058	PRO LOGICIIx MOVIE + THX	for Multi-ch Source	●	●	●
059	DTS + Neo:6 + THX	for Multi-ch Source	●	●	●
060	DTS-ES MATRIX + THX	for Multi-ch Source	●	●	●
061	DTS-ES DISCRETE6.1 + THX	for Multi-ch Source	●	●	●
062	THX SELECT2	for Multi-ch Source	●	●	●
063	THX MUSICMODE SELECT	for Multi-ch Source	●	●	●
064	THX GAMES MODE (for multi-ch)	for Multi-ch Source	●	●	●
065	THX ULTRA2	for Multi-ch Source			
066	THX MUSICMODE	for Multi-ch Source			
005	AUTO SURROUND/STREAM DIRECT (same as key)		●	●	●
006	AUTO SURROUND		●	●	●
007	NORMAL DIRECT		●	●	●
008	PURE DIRECT		●	●	●
150	MULTI CH IN	for only Answer	●	●	●

***5 LISTENING (DECODE) MODE REQUEST [3byte]**

Listed below are the combination of the LISTENING MODE selected by "SR" command and the LISTENING MODE determined by the input source signal.

*) When the LISTENING MODE is set and the format for the source signal is confirmed, the set will send ANSWER COMMAND to outside controller to let it know the status of the LISTENING MODE — it replies automatically and does not need to receive LISTENING MODE REQUEST command.

(Automatic Feedback)

LISTING MODE shows the current signal format the set is receiving or surround mode which has been added to the original signal. LM***

STEREO

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
128	STEREO	●	●	●
129	DIRECT			
130	96kHz STEREO	●	●	●
131	96kHz DIRECT			
132	88kHz STEREO	●	●	●
133	88kHz DIRECT			
134	192kHz STEREO			
304	PCM 88.2kHz STEREO	●	●	●
308	PCM 88.2kHz DIRECT			
305	PCM 96kHz STEREO	●	●	●
309	PCM 96kHz DIRECT			
306	PCM 176.4kHz STEREO	●	●	●
310	PCM 176.4kHz DIRECT			
307	PCM 192kHz STEREO	●	●	●
311	PCM 192kHz DIRECT			
322	DTS 96/24 STEREO	●	●	●
323	DTS 96/24 DIRECT			
356	DVD-AUDIO STEREO	●	●	
357	DVD-AUDIO DIRECT			
358	DVD-AUDIO 88.2kHz STEREO	●	●	
359	DVD-AUDIO 88.2kHz DIRECT			
360	DVD-AUDIO 96kHz STEREO	●	●	
361	DVD-AUDIO 96kHz DIRECT			
362	DVD-AUDIO 176kHz STEREO	●	●	
364	DVD-AUDIO 176kHz DIRECT			
363	DVD-AUDIO 192kHz STEREO	●	●	
365	DVD-AUDIO 192kHz DIRECT			
342	SACD STEREO	●		●
343	SACD DIRECT			
312	A/D 96kHz STEREO			
313	A/D 192kHz STEREO			

STANDARD

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
002	PRO LOGIC	●	●	●
000	PRO LOGICII MOVIE	●	●	●
001	PRO LOGICII MUSIC	●	●	●
005	PRO LOGICII GAME	●	●	●
003	Neo:6 CINEMA	●	●	●
004	Neo:6 MUSIC	●	●	●
050	PRO LOGICIIx MOVIE	●	●	●
051	PRO LOGICIIx MUSIC	●	●	●
056	PRO LOGICIIx GAME	●	●	●
054	Neo:6 88K CINEMA	●	●	●
055	Neo:6 88K MUSIC	●	●	●
052	Neo:6 96K CINEMA	●	●	●
053	Neo:6 96K MUSIC	●	●	●
008	96kHz PRO LOGIC	●	●	●
009	96kHz PRO LOGICII MOVIE	●	●	●
010	96kHz PRO LOGICII MUSIC	●	●	●
011	96kHz PRO LOGICII GAME	●	●	●
057	96kHz PRO LOGICIIx MOVIE	●	●	●
058	96kHz PRO LOGICIIx MUSIC	●	●	●
059	96kHz PRO LOGICIIx GAME	●	●	●
140	PCM88.2kHz + PRO LOGIC	●	●	●
141	PCM88.2kHz + PRO LOGICII MOVIE	●	●	●
142	PCM88.2kHz + PRO LOGICII MUSIC	●	●	●
143	PCM88.2kHz + PRO LOGICII GAME	●	●	●
144	PCM88.2kHz + PRO LOGICIIx MOVIE (for 2ch)	●	●	●
145	PCM88.2kHz + PRO LOGICIIx MUSIC (for 2ch)	●	●	●
146	PCM88.2kHz + PRO LOGICIIx GAME	●	●	●
147	PCM96kHz + PRO LOGIC	●	●	
148	PCM96kHz + PRO LOGICII MOVIE	●	●	
149	PCM96kHz + PRO LOGICII MUSIC	●	●	
150	PCM96kHz + PRO LOGICII GAME	●	●	
151	PCM96kHz + PRO LOGICIIx MOVIE (for 2ch)	●	●	
152	PCM96kHz + PRO LOGICIIx MUSIC (for 2ch)	●	●	
153	PCM96kHz + PRO LOGICIIx GAME	●	●	
162	PCM88.2kHz + PRO LOGICIIx MOVIE (for multichannel)	●	●	●
163	PCM88.2kHz + PRO LOGICIIx MUSIC (for multichannel)	●	●	●
164	PCM96kHz + PRO LOGICIIx MOVIE (for multichannel)	●	●	●
165	PCM96kHz + PRO LOGICvx MUSIC (for multichannel)	●	●	●
031	PCM	●	●	●
300	PCM 88.2kHz	●	●	●
015	PCM 96kHz	●	●	●
302	PCM 176.4kHz	●	●	●
303	PCM 192kHz	●	●	●
327	PCM + SX			
328	PCM 88.2 + SX			
329	PCM 96 + SX			
330	PCM + EX			
331	PCM 88.2 + EX			
332	PCM 96 + EX			
333	PCM + PRO LOGICIIx MOVIE (for multichannel)	●	●	●
334	PCM + PRO LOGICIIx MUSIC (for multichannel)	●	●	●
016	DOLBY DIGITAL	●	●	●
017	DOLBY DIGITAL EX	●	●	●
018	DOLBY DIGITAL SX			
154	DOLBY DIGITAL + PRO LOGICIIx MOVIE	●	●	●
155	DOLBY DIGITAL + PRO LOGICIIx MUSIC	●	●	●
019	DTS	●	●	●
020	DTS-ES			
021	DTS-SX			
022	DTS-ES DISC 6.1	●	●	●
023	DTS-ES MTRX 6.1	●	●	●
030	DTS 96/24	●	●	●
321	DTS 96/24 + SX			
324	DTS + Neo:6	●	●	●
325	DTS 96/24 + Neo:6			
326	DTS 96/24 ES MTRX			
156	DTS + PROLIGICIIx MOVIE	●	●	●
157	DTS + PROLIGICIIx MUSIC	●	●	●
024	MPEG BC			
025	MPEG BC EX			
026	MPEG BC SX			
027	MPEG-2 AAC	●	●	●
028	MPEG-2 AAC EX	●	●	●
029	MPEG-2 AAC SX			

		VSX-84TXSi	VSX-82TXS	VSX-81TXV
158	MPEG-2 AAC + PROLIGICIIx MOVIE	●	●	●
159	MPEG-2 AAC + PROLIGICIIx MUSIC	●	●	●
380	WMA 9 PRO	●	●	●
381	WMA 9 PRO + SX			
382	WMA 9 PRO + EX	●	●	●
384	WMA 9 Pro + PRO LOGICIIx MOVIE	●	●	●
385	WMA 9 Pro + PRO LOGICIIx MUSIC	●	●	●
350	DVD-AUDIO	●	●	
351	DVD-AUDIO 88.2kHz	●	●	
352	DVD-AUDIO 96kHz	●	●	
353	DVD-AUDIO SX			
354	DVD-AUDIO 88.2kHz SX			
355	DVD-AUDIO 96kHz SX			
366	DVD AUDIO + EX	●	●	
367	DVD-AUDIO 88.2kHz + EX	●	●	
368	DVD-AUDIO 96kHz + EX	●	●	
250	DVD-AUDIO + PRO LOGIC	●	●	
251	DVD-AUDIO + PRO LOGICII MOVIE	●	●	
252	DVD-AUDIO + PRO LOGICII MUSIC	●	●	
253	DVD-AUDIO + PRO LOGICII GAME	●	●	
254	DVD-AUDIO + PRO LOGICIIx MOVIE (for 2ch)	●	●	
255	DVD-AUDIO + PRO LOGICIIx MUSIC (for 2ch)	●	●	
256	DVD-AUDIO + PRO LOGICIIx GAME	●	●	
257	DVD-AUDIO + PRO LOGICIIx MOVIE (for multichannel)	●	●	
258	DVD-AUDIO + PRO LOGICIIx MUSIC (for multichannel)	●	●	
260	DVD-AUDIO 88.2k + PRO LOGIC	●	●	
261	DVD-AUDIO 88.2k + PRO LOGICII MOVIE	●	●	
262	DVD-AUDIO 88.2k + PRO LOGICII MUSIC	●	●	
263	DVD-AUDIO 88.2k + PRO LOGICII GAME	●	●	
264	DVD-AUDIO 88.2k + PRO LOGICIIx MOVIE (for 2ch)	●	●	
265	DVD-AUDIO 88.2k + PRO LOGICIIx MUSIC (for 2ch)	●	●	
266	DVD-AUDIO 88.2k + PRO LOGICIIx GAME	●	●	
267	DVD-AUDIO 88.2k + PRO LOGICIIx MOVIE (for multichannel)	●	●	
268	DVD-AUDIO 88.2k + PRO LOGICIIx MUSIC (for multichannel)	●	●	
270	DVD-AUDIO 96k + PRO LOGIC	●	●	
271	DVD-AUDIO 96k + PRO LOGICII MOVIE	●	●	
272	DVD-AUDIO 96k + PRO LOGICII MUSIC	●	●	
273	DVD-AUDIO 96k + PRO LOGICII GAME	●	●	
274	DVD-AUDIO 96k + PRO LOGICIIx MOVIE (for 2ch)	●	●	
275	DVD-AUDIO 96k + PRO LOGICIIx MUSIC (for 2ch)	●	●	
276	DVD-AUDIO 96k + PRO LOGICIIx GAME	●	●	
277	DVD-AUDIO 96k + PRO LOGICIIx MOVIE (for multichannel)	●	●	
278	DVD-AUDIO 96k + PRO LOGICIIx MUSIC (for multichannel)	●	●	
340	SACD	●		●
341	SACD SX			
344	SACD + EX	●		●
280	SACD + PRO LOGIC	●		●
281	SACD + PRO LOGICII MOVIE	●		●
282	SACD + PRO LOGICII MUSIC	●		●
283	SACD + PRO LOGICII GAME	●		●
284	SACD + PRO LOGICIIx MOVIE (for 2ch)	●		●
285	SACD + PRO LOGICIIx MUSIC (for 2ch)	●		●
286	SACD + PRO LOGICIIx GAME	●		●
287	SACD + PRO LOGICIIx MOVIE (for multichannel)	●		●
288	SACD + PRO LOGICIIx MUSIC (for multichannel)	●		●

ADVANCED CINEMA

032	ACTION	●	●	●
033	SCI-FI	●	●	●
034	DRAMA	●	●	●
035	MUSICAL	●	●	●
036	MONOFILM	●	●	●
037	5D-THEATER			
043	7D-THEATER	●	●	●
180	ADVANCED MOVIE			
181	TV SURROUND			
182	SPORTS			
183	GAME			
184	EXPANDED			
185	PHONES SURROUND	●	●	●

ADVANCED CONCERT

096	CLASSICAL	●	●	●
097	CHAMBER	●	●	●
098	JAZZ	●	●	●
099	ROCK	●	●	●
100	DANCE	●	●	●
102	ADVANCED VIRTUAL SURROUND	●	●	●
107	7CH-STEREO	●	●	●

THX

220	PRO LOGIC + THX	●	●	●
221	PRO LOGICII MOVIE + THX	●	●	●
222	Neo:6 CINEMA + THX	●	●	●
087	PRO LOGICIIx MOVIE + THX	●	●	●
223	THX GAMES MODE (for 2ch)	●	●	●
080	THX CINEMA	●	●	●
081	THX SURROUND EX	●	●	●
230	DOLBY DIGITAL + PRO LOGICIIx MOVIE + THX	●	●	●
231	DTS + PRO LOGICIIx MOVIE + THX	●	●	●
234	MPEG-2 AAC + PRO LOGICIIx MOVIE + THX	●	●	●
235	WMA 9 Pro + PRO LOGICIIx MOVIE + THX	●	●	●
085	DTS + Neo:6 + THX	●	●	●
236	THX SELECT2 CINEMA	●	●	●
082	THX ULTRA2 CINEMA			
083	THX MUSIC MODE (SELECT)	●	●	●
237	THX GAMES MODE (for multichannel)	●	●	●
086	DTS96/24 + Neo:6 + THX			
088	7CH IN + THX			
089	8CH IN + THX			
232	DTS-ES MATRIX6.1 + THX	●	●	●
233	DTS-ES DISCRETE6.1 + THX	●	●	●

MULTI-CH / USB

200	6CH IN	●	●	●

STREAM DIRECT

123	XM HD SURROUND	●	●	●
124	SACD DIRECT	●	●	
125	PCM DIRECT	●	●	
126	ANALOG DIRECT	●	●	●
127	PURE DIRECT			

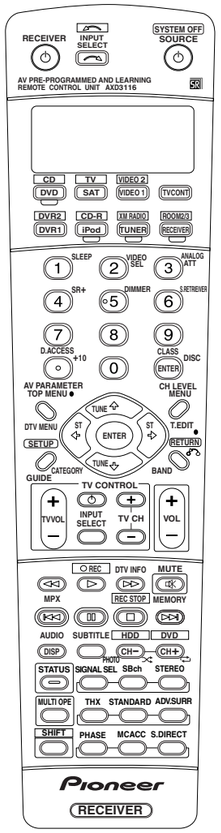
ETC.

219	HDMI THROUGH	●	●	●

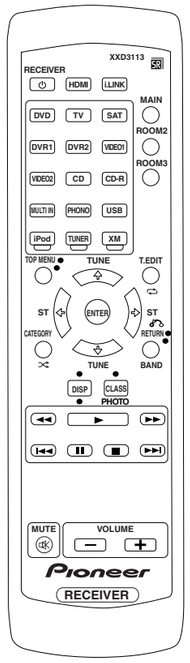
Example8

Command ?L<CR>
Answer LM001<CR+LF> now PRO LOGICII MUSIC playing.

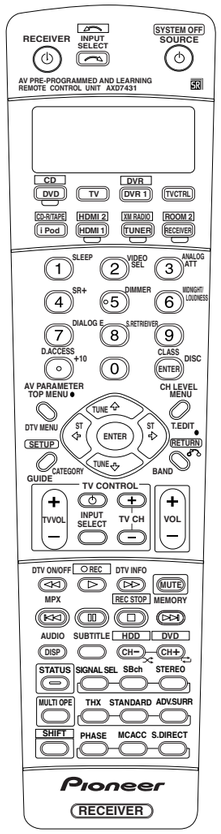
■ REMOTE CONTROLS



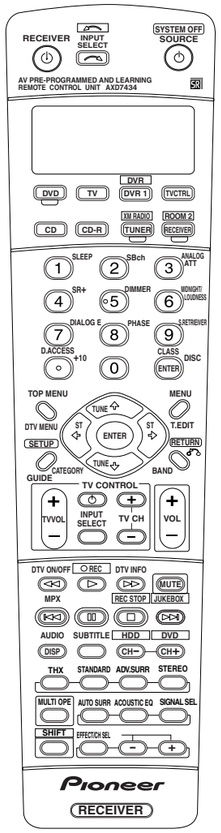
VSX-84TXSi / VSX-82TXS



VSX-84TXSi
(Sub Remote Control)



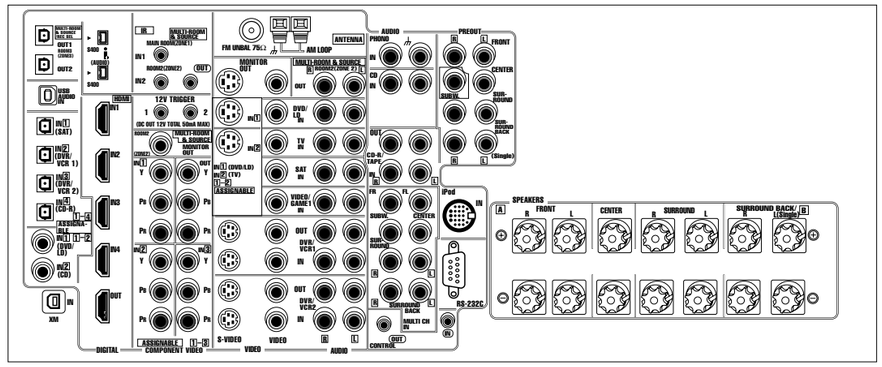
VSX-81TXV



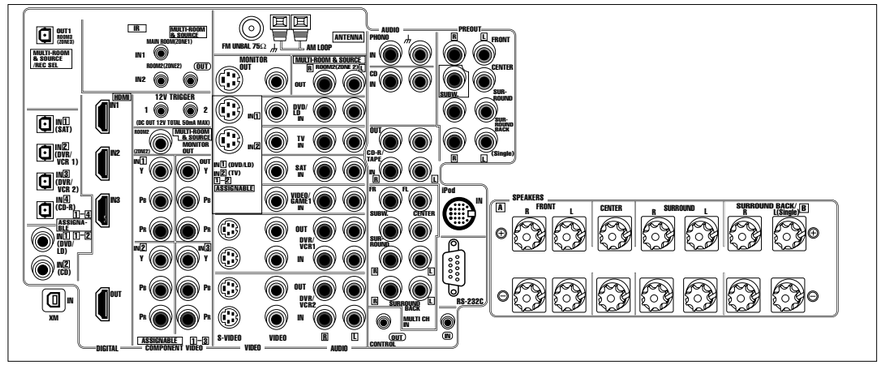
VSX-80TXV

■ REAR PANELS

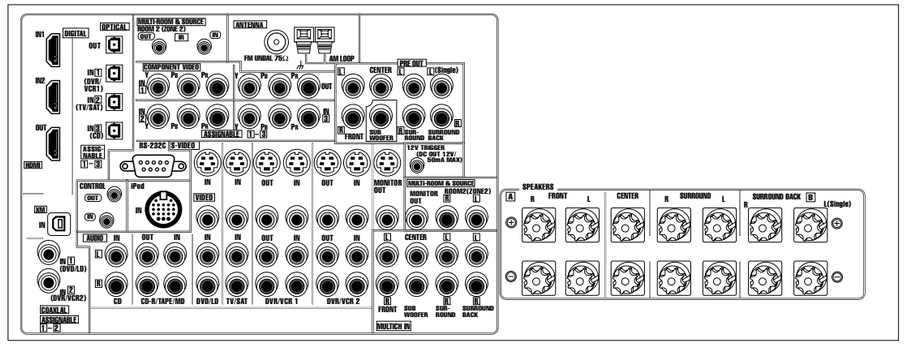
VSX-84TXSi



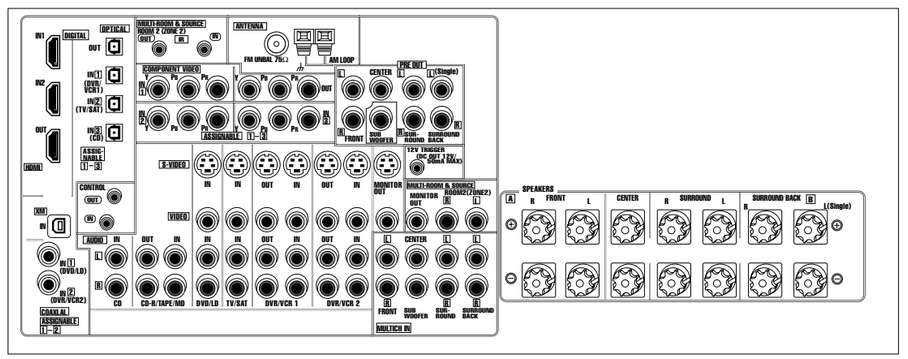
VSX-82TXS



VSX-81TXV



VSX-80TXV

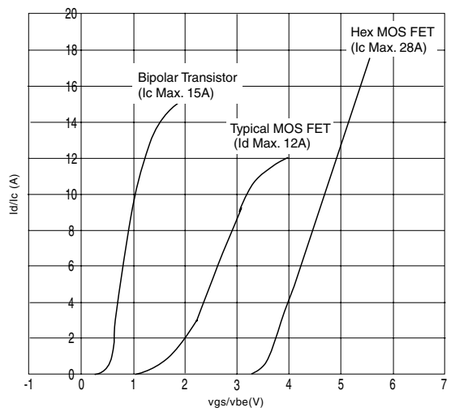


POWER AMPLIFIERS

Advanced Direct Energy MOS FET Power Amp

Advanced Direct Energy MOS FETs are simply high-performance devices. Working with Pioneer's Wide-Range Linear Circuit technology, they feature reduced power consumption without sacrificing power output. Moreover, Pioneer's MOS FETs help achieve a flat damping factor across a wide audio spectrum, a wide frequency range, and a higher accuracy at ultra high frequencies while improving power linearity.

Comparison of Linearity: Bipolar Transistor vs. MOS FET



Wide-Range Linear Circuit Amp

The Wide-Range Linear Circuit features a superior open-loop gain response. This means that, with the use of only a nominal amount of feedback and a simple one-pole filter, the circuit applies NFB (Negative Feedback) at high stability for frequencies over a wide range, in order to minimize distortion. Moreover, since its output impedance is flat and low over an extended range, the circuit's rejection of external noise is improved.

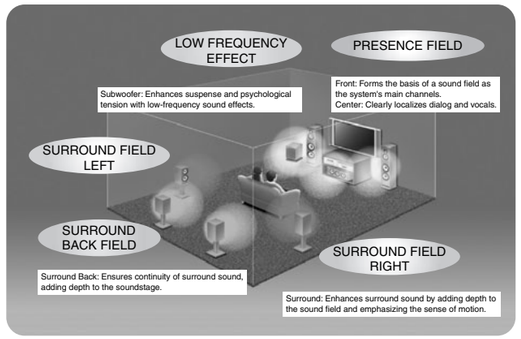
Transformer Stabilizer

The heavy, high-capacitance power transformer is doubly secured to the chassis — by a stabilizer and an additional frame. This elaborate construction improves the dynamic stability, rigidity and insulation characteristics of the chassis, leading to improved sound quality.

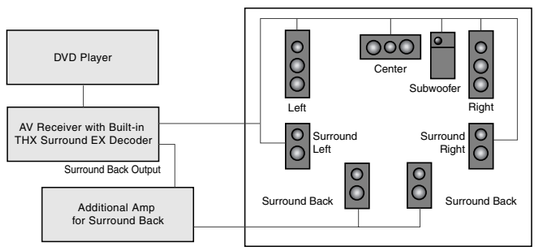
SB (Surround Back) Mode (M-10X/A-35R) and MR/MS Capability (A-35R)

Pioneer Elite receivers feature 7.1-channel THX Surround EX and Dolby Digital Surround EX. But even if your Pioneer Surround EX receiver comes with amplifiers for 5.1 channels, it's simple to upgrade it to the full glory of 7.1-channel sound. Just connect the M-10X to your receiver to drive the SBL and SBR (Surround Back Left and Right) channels. You can remotely turn on and off the M-10X as you do so with the receiver by using SR connections.

The A-35R is functionally flexible. It can be used in a Surround EX system to drive SBL and SBR channels, as part of a Multi-Room/Multi-Source Remote Control system, or as the center unit of a secondary hi-fi system that includes a source player such as a CD player.

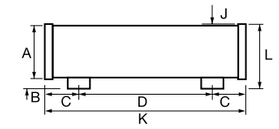

LOW FREQUENCY EFFECT
PRESENCE FIELD
Subwoofer: Enhances suspense and psychological tension with low-frequency sound effects.
Front: Forms the basis of a sound field as the system's main channels.
Center: Clearly localizes dialog and vocals.
SURROUND FIELD LEFT
SURROUND BACK FIELD
SURROUND FIELD RIGHT
Surround Back: Ensures continuity of surround sound, adding depth to the soundstage.
Surround: Enhances surround sound by adding depth to the sound field and emphasizing the sense of motion.

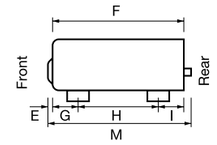
Connection Diagram (Conceptual) of THX Surround EX-Compatible AV Amp

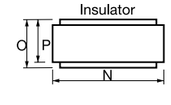


■ DIMENSIONS

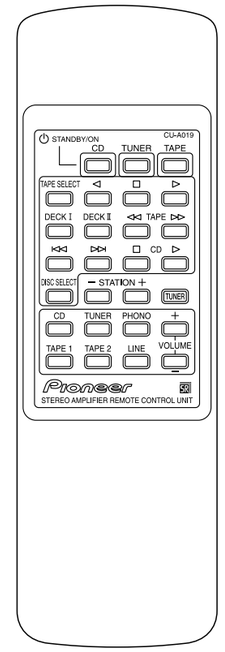
	M-10X		A-35R	
A	108.8 mm	4-5/16"	95 mm	3-3/4"
B	18.6 mm	3/4"	19 mm	3/4"
C	34.3 mm	1-3/8"	40 mm	1-9/16"
D	351.4 mm	13-13/16"	340 mm	13-3/8"
E	3.9 mm	1/8"	20 mm	13/16"
F	289.1 mm	11-3/8"	261 mm	10-1/4"
G	53.3 mm	2-1/8"	54 mm	2-1/8"
H	180.7 mm	7-1/8"	172 mm	6-3/4"
I	54.9 mm	2-3/16"	35 mm	1-3/8"
J	–	–	–	–
K	420 mm	16-9/16"	420 mm	16-9/16"
L	127.4 mm	5"	114 mm	4-1/2"
M	319.1 mm	12-9/16"	307 mm	12-1/16"
N	–	–	ø55 mm	ø2-3/16"
O	–	–	–	–
P	–	–	–	–







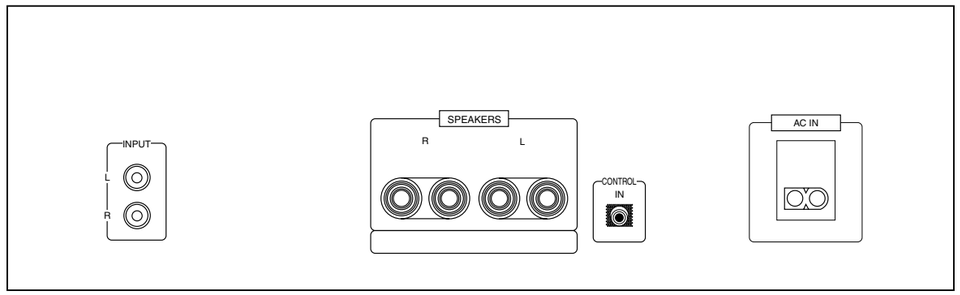
■ REMOTE CONTROL



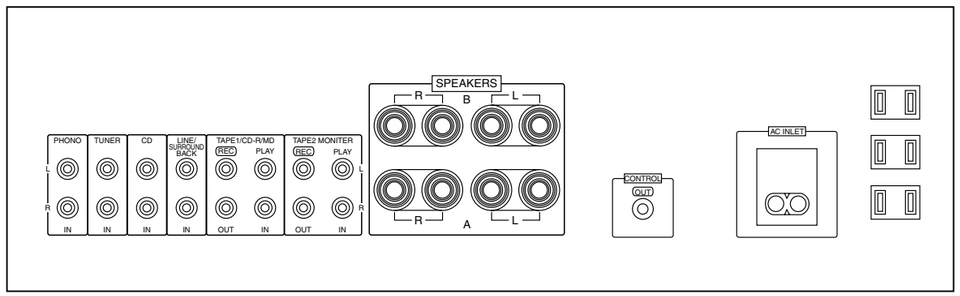
A-35R

■ REAR PANELS

M-10X



A-35R



FILE-TYPE CD PLAYER

Hi-Bit Legato Link Conversion

Hi-Bit Legato Link Conversion combines Pioneer-developed bit expansion technology with Legato Link for still better musical reproduction. In the process of recording and mastering a CD, low-level signals — signals lower than LSB (Least Significant Bit) of a CD's 16-bit system — are removed. But the absence of low-level signals causes quantization noise, resulting in a stepped waveform of converted analog signals — proof that reproduced sound is quite unlike the original.

Pioneer Hi-Bit Legato Link Conversion restores the lost signals by computing the original waveform from 16-bit data stored on the CD and performing re-quantization in expanded 24-bit data form. This conversion process results in a waveform which is both smoother and closer to the original than conventional technology allows. And Legato Link provides the additional benefit of extending the frequency response from 20 kHz to 40 kHz to ensure more accurate reproduction.

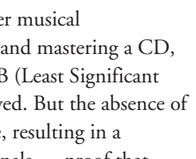
DAC24

By taking advantage of Delta Sigma 1-bit conversion technology, Pioneer's DAC24 is fully compatible with the expanded 24-bit data output through Hi-Bit Legato Link Conversion. Moreover, the D/A converter is highly resistant to jitters (short-term timing irregularities) present in the system clock. This means resolution is high and harmonic distortion low even in face of jitters in the clock.

Roulette Rack System with Single-Disc Loader

For people who want the efficiency of a 300-CD storage unit and CD player combined in one high-performance component, the PD-F27 File-Type CD player is a dream come true. Pioneer's Roulette Rack System gives you instant access to 300 Compact Discs, while a single-disc loader lets you play a single disc without disturbing the CDs in the rack. There's a priority key on the front panel to play the single disc instantly.

Single Loader



Roulette Rack System

Center Loading Mechanism

The Roulette Rack System has been designed to be more convenient. Pioneer's exclusive Center Loading Mechanism places the pickup and disc playback servomechanism inside the turntable. This helps reduce the size of the PD-F27 to a mere 16-9/16 inches (420 mm) in width, making it probably the most compact 300-CD changer in the world. Reliability is improved too because the number of mechanical parts used to build the mechanism has been drastically reduced. Loading and access time has also been accelerated.

Custom Filing Function

The "custom filing" function gives organization to your CD library. On the PD-F27, this function allows you to divide the 300 loaded discs into ten groups ("custom" files) so you can classify discs by type, composer or some other key. The data on discs in custom files is stored in memory, so you can reclassify discs without physically moving them. The same disc can even be put in more than one file. You can set the player to play only the discs in a custom file — in random order, if you want. Moreover, the unit comes with ten CUSTOM FILE keys to choose the desired file directly.

Auto Disc Detection

As you close the disc storage hood, an optical sensor checks if each of the 300 disc slots is occupied and puts the data into memory. This ensures efficient search and play of any disc and track. Memory backup keeps slot occupancy information alive while the player is powered off.

Best Selection Memory

Want to store a track in memory for an encore at a touch? Just press the "BEST" key while it's being played — programming is as simple as that. Press the "STOP" key to end your selection, and up to 50 favorites are played back in order.

Previous Disc Scan

Discs are automatically programmed each time they are played. When you press the "PREVIOUS" key, Previous Disc Scan will play the programmed discs in memory on a last-in, first-out basis — starting with the most recent and moving backward to the first memorized. Press the "PLAY" key when you've found the disc you want. Up to 20 discs are stored in memory.

Connect Two PD-F27s for Direct Access to 602 Discs

By connecting two PD-F27s through the MASTER/SLAVE control terminals, you can instantly access up to 602 discs. This is a "plug and play" function; no resetting or additional controller is required.

CD Text Compatible

CD Text displays disc and track titles of CD-Text-encoded discs. The jog dial lets you conveniently search for a desired track or disc by title or artist name. A dot-matrix fluorescent panel allows high-resolution display of numbers and characters.

Keyboard Title Input

You can name loaded CDs efficiently by entering their titles on an IBM PC-compatible keyboard, as well as through the jog dial and remote control.

Random Play of Tracks from 300 Discs

The PD-F27 comes with three random play options. ALL mode plays all tracks from all discs once in random order; play stops when every track or one track each from all the discs is played back. SINGLE mode plays tracks from a single disc in random order; play stops when all tracks on a disc are finished playing. CUSTOM mode sets one track from each of the discs, chosen in random order, in a "custom" file; play stops when 300 tracks are played back. With so many discs and tracks to randomly choose from, the combinations — and the fun — are literally endless.

Using the PD-F27

How to Load Discs

Loading Discs into the Rack

- You can load up to 300 discs into the PD-F27's rack. The rack carries numbers — "disc numbers" — for disc slots ranging from 1 to 300, counting in clockwise order.
- The following procedure describes how to load discs starting with Disc Number 1.

1. Turn the power on.
- If the STANDBY indicator is lit, press the STANDBY/ON button on the unit or the remote control unit.

2. Ensure that the display shows Disc Number 1.
If it is not, press the NUMBER 1 button on the remote control unit. (Go to Step 3 within five seconds.)

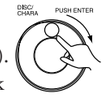
3. Press the UNLOAD button.
When the UNLOAD button is pressed, the hood opens to reveal the disc up front with the Disc Number shown on the display.

4. Load a disc into the rack with the label side (printed surface) facing to the right.
The music side faces left (that is, the label side faces right).

The music side faces left (that is, the label side faces right).

Note: Don't insert more than one disc into the slot.
Doing so may damage the discs and cause mechanical malfunction.

5. Turn the jog dial clockwise to rotate the rack.
When you turn the jog dial clockwise, the rack turns with the disc numbers increasing (1, 2, 3, ...). When you turn the dial counterclockwise, the rack turns in the opposite direction.



6. Load other discs into the rack by repeating steps 4 and 5.

7. Press the OPEN/CLOSE button.
- The hood will close.

When the hood closes, the rack is revolved once for automatic disc detection, with the sensor checking if each numbered disc slot is occupied.

Tips:
The OPEN/CLOSE and UNLOAD buttons operate differently —
OPEN/CLOSE: With the touch of the button, the hood is opened or closed.
UNLOAD: The disc slot for the displayed Disc Number is moved to the center position, then the hood is opened.

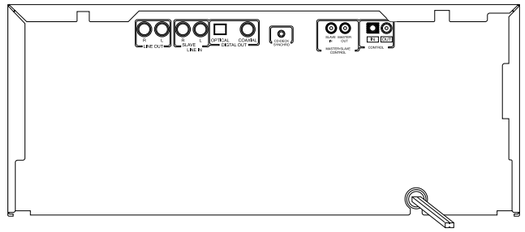
Notes:
- Do not attempt to open the hood with your hand.
- Be careful not to get your finger caught in the hood when opening or closing it.
- A play, BEST, HI-LITE SCAN or PREVIOUS DISC SCAN operation may be carried out before the process of disc detection ends. In such cases, detection will be performed after playback. A disc may not be detected correctly because of its color, shape or other physical property.

Removing Discs

1. Press the UNLOAD button.
2. Choose the number of the disc you want to remove with the jog dial or the DISC (-/+) button on the remote control unit.
   - The rack rotates until the selected disc is moved to the front of the unit.
3. Remove the disc from the rack.
4. Press the OPEN/CLOSE button.
   - The hood will close.

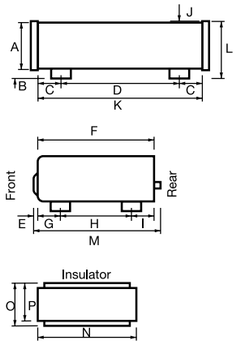
■ REAR PANEL

PD-F27

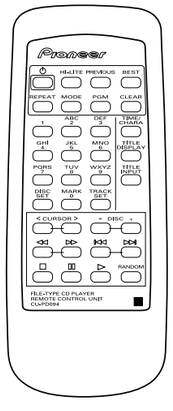


■ DIMENSIONS

	PD-F27	
A	175 mm	6-7/8"
B	18 mm	11/16"
C	40 mm	1-9/16"
D	340 mm	13-3/8"
E	7.5 mm	5/16"
F	420 mm	16-9/16"
G	90.5 mm	3-9/16"
H	272 mm	10-11/16"
I	57.5 mm	2-1/4"
J	—	—
K	420 mm	16-9/16"
L	193 mm	7-5/8"
M	433 mm	17-1/16"
N	ø55 mm	ø2-3/16"
O	19 mm	3/4"
P	16.5 mm	5/8"



■ REMOTE CONTROL



PD-F27

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